

DCR-TRV320/TRV320E/TRV320P/TRV420E/ TRV520/TRV520E/TRV520P/TRV525/ TRV620E/TRV720/TRV720E RMT-814

SERVICE MANUAL

Self Diagnosis
Supported model

Ver 1.0 2000.03

Digital Handycam

 InfoLITHIUM


MEMORY STICK™

B700 MECHANISM



Photo: DCR-TRV320

US Model
DCR-TRV320/TRV520/TRV525/TRV720

Canadian Model
DCR-TRV320/TRV525/TRV720

AEP Model
DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E

UK Model
DCR-TRV320E/TRV620E

East European Model
North European Model

Russian Model
DCR-TRV320E

E Model
DCR-TRV320/TRV320E/TRV320P/
TRV520/TRV520E/TRV520P/TRV720/TRV720E

Hong Kong Model
DCR-TRV320/TRV320E/
TRV520/TRV520E/TRV720E

Korea Model
DCR-TRV320/TRV520/TRV720

Argentina Model
DCR-TRV520P

Australian Model
DCR-TRV320E/TRV520E

Chinese Model
DCR-TRV320E/TRV420E/TRV520E/TRV720E

Tourist Model
DCR-TRV520/TRV520E

NTSC MODEL : DCR-TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720
PAL MODEL : DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E

When the machine needs to be repaired,
please refer to page 9 to discriminate
the type of LCD.

For MECHANISM ADJUSTMENT, refer to
the "8mm Video MECHANICAL
ADJUSTMENT MANUAL VII" (9-973-801-11).

SPECIFICATIONS

Video camera recorder

System

Video recording system

2 rotary heads

Helical scanning system

Audio recording system

Rotary heads, PCM system

Quantization: 12 bits (Fs 32 kHz,

stereo 1, stereo 2), 16 bits

(Fs 48 kHz, stereo)

Video signal

DCR-TRV320/TRV320P/TRV520/

TRV520P/TRV525/TRV720 :

NTSC color, EIA standards

DCR-TRV320E/TRV420E/TRV520E/

TRV620E/TRV720E :

PAL colour, CCIR standards

Recommended cassette

Hi8/Digital8 video cassette

Recording/Playback time (using 120 min. Hi8 video cassette)

SP mode: 1 hour

LP mode: 1 hour and 30 minutes

Fastforward/rewind time (using 120 min. Hi8 video cassette)

Approx. 5 min.

Viewfinder

Electric Viewfinder (monochrome)

Image device

1/4 type CCD (Change Coupled

Device)

DCR-TRV320/TRV320P/TRV520/

TRV520P/TRV525/TRV720 :

Approx. 460,000 pixels

(Effective: Approx. 290,000 pixels)

DCR-TRV320E/TRV420E/TRV520E/

TRV620E/TRV720E :

Approx. 800,000 pixels

(Effective: Approx. 400,000 pixels)

Lens

Combined power zoom lens

Filter diameter 37 mm (1 1/2 in.)

25× (Optical)

DCR-TRV320/TRV320E: E, AUS, HK,

CN/TRV320P/TRV420E: CN/TRV520/

TRV520E: E, AUS, HK, CN, JE/

TRV520P/TRV525/TRV720/TRV720E:

E, HK, CN :

450× (Digital)

DCR-TRV320E: AEP, UK, EE, NE, RU/

TRV520E: AEP/TRV620E/TRV720E:

AEP :

100× (Digital)

DCR-TRV420E: AEP :

125× (Digital)

Focal length

3.7 - 92.5 mm (5/32 - 3 3/4 in.)

When converted to a 35 mm still camera

48 - 1200 mm (1 15/16 - 47 1/4 in.)

Colour temperature

Auto

Minimum illumination

DCR-TRV320/TRV320P/TRV520/

TRV520P/TRV525/TRV720 :

1 lux (F 1.6)

DCR-TRV320E/TRV420E/TRV520E/

TRV620E/TRV720E :

3 lux (F 1.6)

0 lux (in the NightShot mode)*

* Objects unable to be seen due to the

dark can be shot with infrared

lighting.

Input/output connectors

DCR-TRV320/TRV320P/TRV520/

TRV520P/TRV525/TRV720 :

S video input/output

4-pin mini DIN

Luminance signal: 1 Vp-p,

75 ohms, unbalanced

Chrominance signal: 0.286 Vp-p,

75 ohms, unbalanced

Audio/Video input/output

AV MINIJACK, 1 Vp-p, 75 ohms,

unbalanced, sync negative

327 mV, (at output impedance more than

47 kilohms)

Output impedance with less than 2.2

kilohms/Stereo minijack (ø 3.5 mm)

Input impedance more than 47 kilohms

DCR-TRV320E: E, AUS, HK, CN/

TRV420E: CN/TRV520E: E, AUS, HK,

CN, JE/TRV620E/TRV720E :

S video input/output

4-pin mini DIN

Luminance signal: 1 Vp-p,

75 ohms, unbalanced

Chrominance signal: 0.3 Vp-p,

75 ohms, unbalanced

Audio/Video output

AV MINIJACK, 1 Vp-p, 75 ohms,

unbalanced, sync negative

327 mV, (at output impedance more than

47 kilohms)

Output impedance with less than 2.2

kilohms/Stereo minijack (ø 3.5 mm)

DCR-TRV320E: AEP, UK, EE, NE, RU/

TRV420E: AEP/TRV520E: AEP :

— Continued on next page —

Digital 8 DIGITAL VIDEO CASSETTE RECORDER

SONY®

S video output

4-pin mini DIN
Luminance signal: 1 Vp-p,
75 ohms, unbalanced
Chrominance signal: 0.3 Vp-p,
75 ohms, unbalanced
Audio/Video output
AV MINIJACK, 1 Vp-p, 75 ohms,
unbalanced, sync negative
327 mV, (at output impedance more than
47 kilohms)

Output impedance with less than 2.2
kilohms/Stereo minijack (ø 3.5 mm)
DCR-TRV320/TRV320E: E, AUS, HK,
CN/TRV320P/TRV420E: CN/TRV520/
TRV520E: E, AUS, HK, CN, JE/
TRV520P/TRV525/TRV620E/TRV720/
TRV720E :

DV input/output

4-pin connector
DCR-TRV320E: AEP, UK, EE, NE, RU/
TRV420E: AEP/TRV520E: AEP :

DV output

4-pin connector

Headphone jack

Stereo minijack (ø 3.5 mm)

LANC control jack

Stereo mini-minijack (ø 2.5 mm)
Transfer rate: Max 115.2 Kbps
RS-232C based

MIC jack

Stereo minijack (ø 3.5 mm)

LCD screen

Picture

DCR-TRV320/TRV320E/TRV320P :
2.5 type
50.3 × 37.4 mm (2 × 1 1/2 in.)
DCR-TRV420E/TRV525 :
3 type
61.0 × 43.8 mm (2 1/2 × 1 3/4 in.)
DCR-TRV520/TRV520E/TRV520P/
TRV620E :
3.5 type
72.2 × 50.4 mm (2 7/8 × 2 in.)
DCR-TRV720/TRV720E :
4 type
80.6 × 60.5 mm (3 1/4 × 2 1/2 in.)

Total dot number

DCR-TRV320/TRV320E: E, AUS, HK,
CN/TRV320P :
61,600 (280 × 220)
DCR-TRV320E: AEP, UK, EE, NE, RU/
TRV420E/TRV520/TRV520E/TRV520P/
TRV525/TRV620E/TRV720/TRV720E :
123,200 (560 × 220)

General

power requirements

7.2 V (battery pack)
8.4 V (AC power adaptor)

**Average power consumption
(When using the battery pack)**

During camera recording using
LCD
DCR-TRV320E: AEP, UK, EE, NE, RU :
3.5 W
DCR-TRV320/TRV320E: E, AUS, HK,
CN/TRV320P :
3.7 W
DCR-TRV720/TRV720E :
4.4 W
DCR-TRV420E/TRV520/TRV520E/
TRV520P/TRV525/TRV620E :
4.5 W
Viewfinder
DCR-TRV320E: AEP, UK, EE, NE, RU :
2.8 W
DCR-TRV420E: AEP/TRV520E: AEP/
TRV525/TRV620E/TRV720/TRV720E :
3.1 W
DCR-TRV320/TRV320E: E, AUS, HK,
CN/TRV320P :
3.3 W
DCR-TRV420E: CN/TRV520/TRV520E:
E, AUS, HK, CN, JE/TRV520P :
3.6 W

Operating temperature
0 °C to 40 °C (32 °F to 104 °F)

Storage temperature
-20 °C to +60 °C (−4 °F to +140 °F)

Dimensions (approx.)
DCR-TRV320/TRV320E/TRV320P :
107 × 106 × 233 mm
(4 1/4 × 4 1/4 × 9 1/4 in.) (w/h/d)
DCR-TRV420E/TRV520/TRV520E/
TRV520P/TRV525/TRV620E :
111 × 106 × 207 mm
(4 1/2 × 4 1/4 × 8 1/4 in.) (w/h/d)
DCR-TRV720/TRV720E :
112 × 121 × 218 mm
(4 1/2 × 4 7/8 × 8 5/8 in.) (w/h/d)

Mass (approx.)

DCR-TRV320/TRV320E/TRV320P :
950 g (2 lb 1 oz)
DCR-TRV420E/TRV525 :
980 g (2 lb 2 oz)
DCR-TRV520/TRV520E/TRV520P/
TRV620E :
990 g (2 lb 2 oz)
DCR-TRV720/TRV720E :
1.1 kg (2 lb 6 oz)
excluding the battery pack, lithium
battery, cassette and shoulder strap
DCR-TRV320/TRV320E/TRV320P/
TRV420E/TRV520/TRV520E/TRV520P/
TRV525/TRV620E :
1.1 kg (2 lb 7 oz)
DCR-TRV720/TRV720E :
1.2 kg (2 lb 10 oz)
DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720 :
including the battery pack NP-F330,
lithium battery CR2025, 120 min. Hi8
cassette, and shoulder strap
DCR-TRV320E/TRV420E: CN/
TRV520E/TRV620E/TRV720E :
including the battery pack NP-F330,
lithium battery CR2025, 90 min. Hi8
cassette, and shoulder strap
DCR-TRV420E: AEP :
including the battery pack NP-F550,
lithium battery CR2025, 90 min. Hi8
cassette, and shoulder strap

AC power adaptor

Power requirements

100 - 240 V AC, 50/60 Hz

Power consumption

23 W

Output voltage

DC OUT: 8.4 V, 1.5 A in the
operating mode

Operating temperature

0 °C to 40 °C (32 °F to 104 °F)

Storage temperature

−20 °C to +60 °C (−4 °F to +140 °F)

Dimensions (approx.)

125 × 39 × 62 mm
(5 × 1 9/16 × 2 1/2 in.) (w/h/d)

excluding projecting parts

Mass (approx.)

280 g (9.8 oz)

excluding power cord

Battery Pack

Output voltage

DC 7.2 V

Capacity

DCR-TRV320/TRV320E/TRV320P/
TRV420E: CN/TRV520/TRV520E/
TRV520P/TRV525/TRV620E/TRV720/
TRV720E :
NP-F330: 5.0 Wh
DCR-TRV420E: AEP :
NP-F550: 10.8 Wh

Dimensions (approx.)

38 × 21 × 71 mm
(1 9/16 × 1 3/16 × 2 7/8 in.) (w/h/d)

Mass (approx.)

95 g (3.4 oz)

Type

Lithium ion

“Memory Stick”

Memory

Flash memory

4 MB; MSA-4A

Operating voltage

2.7 - 3.6 V

Power consumption

Approx. 45 mA in the operating mode

Approx. 130 µA in the standby mode

Dimensions (approx.)

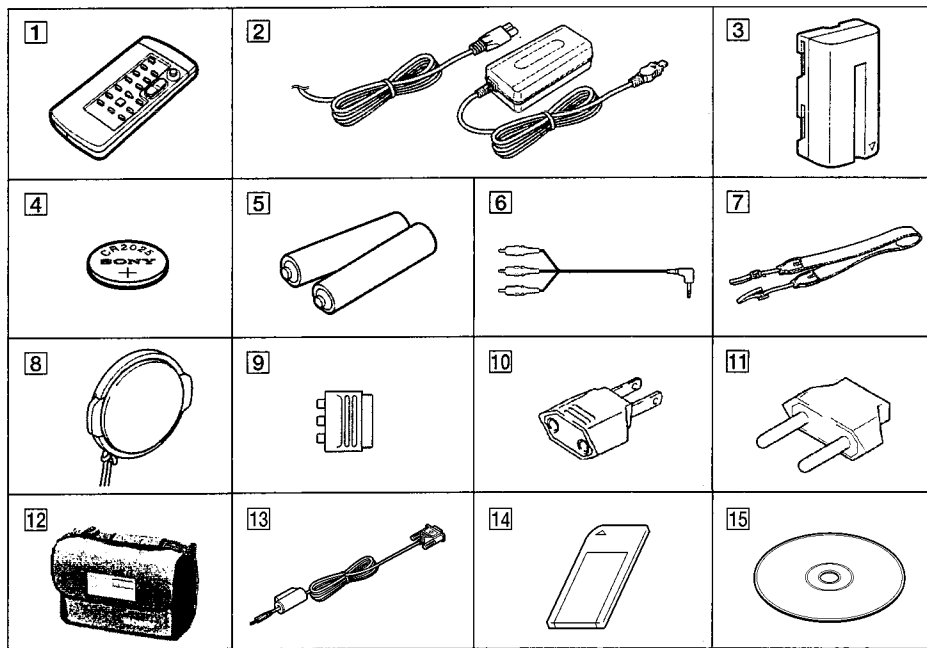
50 × 2.8 × 21.5 mm
(2 × 1/8 × 7/8 in.) (w/h/d)

Mass (approx.)

4 g (0.14 oz)

Design and specifications are subject to
change without notice.

Supplied accessories



- | | |
|--|--|
| <p>1 Wireless Remote Commander (1)</p> <p>2 AC-L10A/L10B/L10C AC Power adaptor (1), Mains lead (1)</p> <p>3 NP-F330 battery pack (1) DCR-TRV320/TRV320E/TRV320P/TRV420E: CN/TRV520E/TRV520P/TRV525/TRV620E/TRV720/TRV720E NP-F550 battery pack (1) DCR-TRV420E: AEP</p> <p>4 CR2025 lithium battery (1) The lithium battery is already installed in your camcorder.</p> <p>5 R6 (Size AA) battery for Remote Commander (2)</p> <p>6 A/V connecting cable (1)</p> <p>7 Shoulder strap (1)</p> | <p>8 Lens cap (1)</p> <p>9 21-pin adaptor (1) DCR-TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP/TRV620E/TRV720E: AEP</p> <p>10 2-pin conversion adaptor (1) DCR-TRV320: E, HK/TRV320E: E, HK/TRV320P/TRV520: E, HK/TRV520E: E, HK/TRV520P: E/TRV720: E/TRV720E: E, HK</p> <p>11 2-pin conversion adaptor (1) DCR-TRV520: JE/TRV520E: JE</p> <p>12 Carrying bag (1) DCR-TRV320P/TRV520P</p> <p>13 PC serial cable (1)</p> <p>14 "Memory Stick" (1)</p> <p>15 Application software: PictureGear 4.1 Lite (CD ROM) (1)</p> |
|--|--|

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

- Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
- Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
- Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
- Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the B+ voltage to see it is at the values specified.
- Flexible Circuit Board Repairing
 - Keep the temperature of the soldering iron around 270 °C during repairing.
 - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
 - Be careful not to apply force on the conductor when soldering or unsoldering.

TABLE OF CONTENTS

| <u>Section</u> | <u>Title</u> | <u>Page</u> | <u>Section</u> | <u>Title</u> | <u>Page</u> |
|--------------------------------|--|-------------|--|--|-------------|
| SERVICE NOTE | | | | | |
| 1. | Power Supply During Repairs | 8 | | Copying the Image Recorded on "Memory Stick" to Tapes | 1-28 |
| 2. | To Take Out a Cassette | | | Enlarging Recorded Still Images on "Memory Stick"s – Memory PB ZOOM | 1-29 |
| | When Not Eject (Force Eject) | 8 | | Playing Back Images in a Continuous Loop – SLIDE SHOW | 1-29 |
| 3. | Note for Repair | 9 | | Preventing Accidental Erasure – Image Protection | 1-30 |
| 4. | Self-diagnosis Code Table | 11 | | Deleting Images | 1-30 |
| SELF-DIAGNOSIS FUNCTION | | | | Writing a Print Mark – PRINT MARK | 1-31 |
| 1. | Self-diagnosis Function | 10 | | Digital8 System, Recording and Playback | 1-31 |
| 2. | Self-diagnosis Display | 10 | | About i. LINK | 1-32 |
| 3. | Service Mode Display | 10 | | Changing the Lithium Battery in Your Camcorder | 1-32 |
| 3-1. | Display Method | 10 | | Troubleshooting | 1-33 |
| 3-2. | Switching of Backup No. | 10 | | Self-diagnosis Display | 1-34 |
| 3-3. | End of Display | 10 | | Warning Indicators and Messages | 1-34 |
| 4. | Self-diagnosis Code Table | 11 | | Using Your Camcorder Abroad | 1-35 |
| 1. GENERAL | | | | Maintenance Information and Precautions | 1-35 |
| | Checking Supplied Accessories | 1-1 | | Identifying the Parts and Controls | 1-36 |
| | Quick Start Guide | 1-1 | 2. DISASSEMBLY | | |
| | Using This Manual | 1-2 | 2-1. | 2.5 LCD Assembly, PD-117 Board | 2-2 |
| | Step 1 Preparing the Power Supply | 1-2 | 2-2. | 3/3.5/4 LCD Assembly, PD-118 Board | 2-3 |
| | Step 2 Inserting a Cassette | 1-4 | 2-3. | VF-141 Board, VF Lens Assembly (LCD EVF Model) | 2-4 |
| | Recording a Picture | 1-4 | 2-4. | Front Panel Assembly | 2-5 |
| | Checking the Recording – END SEARCH/EDIT SEARCH/Rec Review | 1-7 | 2-5. | Cassette Lid Assembly, Cabinet (L) Assembly | 2-5 |
| | Playing Back a Tape | 1-7 | 2-6. | Cabinet (R) Assembly | 2-6 |
| | Viewing the Recording on TV | 1-9 | 2-7. | CRT EVF Block | 2-6 |
| | Recording a Still Image on a Tape – Tape Photo Recording | 1-9 | 2-8. | CRT EVF Assembly | 2-6 |
| | Using the Wide Mode | 1-10 | 2-9. | VF-129 Board, CRT Assembly | 2-6 |
| | Using the Fader Function | 1-11 | 2-10. | CF-69 Board (2.5 LCD Model) | 2-7 |
| | Using Special Effects – Picture Effect | 1-11 | 2-11. | CF-70 Board (3/3.5 LCD Model) | 2-7 |
| | Using Special Effects – Digital Effect | 1-12 | 2-12. | CF-72 Board (4 LCD Model) | 2-8 |
| | Using the PROGRAM AE Function | 1-13 | 2-13. | PC-77 Board | 2-8 |
| | Adjusting the Exposure Manually | 1-13 | 2-14. | Cabinet (L) Assembly | 2-8 |
| | Focusing Manually | 1-13 | 2-15. | Battery Panel Assembly, FP-162 Flexible Board | 2-8 |
| | Superimposing a Title | 1-14 | 2-16. | Lens Block | 2-9 |
| | Making Your Own Titles | 1-14 | 2-17. | SE-104/112/114 Board, Control Switch Block (FK-10000) | 2-9 |
| | Inserting a Scene | 1-15 | 2-18. | FU-138/142/144 Board | 2-10 |
| | Playing Back a Tape with Picture Effects | 1-15 | 2-19. | VC-235 Board | 2-10 |
| | Playing Back a Tape with Digital Effects | 1-15 | 2-20. | Circuit Boards Location | 2-11 |
| | Enlarging Recorded Images – PB ZOOM | 1-16 | 2-21. | Flexible Boards Location | 2-12 |
| | Quickly Locating a Scene Using the Zero Set Memory Function | 1-16 | 3. BLOCK DIAGRAMS | | |
| | Searching a Recording by Date – Date Search | 1-16 | 3-1. | Overall Block Diagram 1 | 3-1 |
| | Searching for a Photo – Photo Search/Photo Scan | 1-17 | 3-2. | Overall Block Diagram 2 | 3-3 |
| | Dubbing a Tape | 1-17 | 3-3. | Overall Block Diagram 3 | 3-5 |
| | Using with Analog Video Unit and PC – Signal Convert Function | 1-18 | 3-4. | Overall Block Diagram 4 | 3-7 |
| | Recording Video or TV Programmes | 1-19 | 3-5. | Power Block Diagram 1 | 3-9 |
| | Inserting a Scene from a VCR – Insert Editing | 1-20 | 3-6. | Power Block Diagram 2 | 3-11 |
| | Changing the Menu Settings | 1-20 | 3-7. | Power Block Diagram 3 | 3-13 |
| | Resetting the Date and Time | 1-22 | 4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS | | |
| | Using "Memory Stick" – Introduction | 1-23 | 4-1. | Frame Schematic Diagrams | 4-3 |
| | Recording Still Images on "Memory Stick" – Memory Photo Recording | 1-24 | | Frame (1/2) Schematic Diagram | 4-3 |
| | Superimposing a Still Image in the "Memory Stick" on a moving Image – MEMORY MIX | 1-25 | | Frame (2/2) Schematic Diagram | 4-5 |
| | Recording an Image from a Tape as a Still Image | 1-26 | 4-2. | Printed Wiring Boards and Schematic Diagrams | 4-7 |
| | Copying Still Images from a Tape – Photo Save | 1-27 | | CD-242/266/270 Printed Wiring Board and Schematic Diagram | 4-7 |
| | Viewing a Still Image – Memory Photo Playback | 1-27 | | CD-244/267/271 Printed Wiring Board and Schematic Diagram | 4-9 |
| | | | | VC-235 Printed Wiring Board | 4-11 |
| | | | | VC-235 (CAMERA PROCESSOR) Schematic Diagram | 4-15 |
| | | | | VC-235 (Y/C PROCESSOR) Schematic Diagram | 4-17 |

| <u>Section</u> | <u>Title</u> | <u>Page</u> |
|----------------|---|-------------|
| | VC-235 (LENS MOTOR DRIVE) | |
| | Schematic Diagram | 4-19 |
| | VC-235 (VIDEO IN/OUT) Schematic Diagram | 4-21 |
| | VC-235 (BASE BAND INPUT) | |
| | Schematic Diagram | 4-23 |
| | VC-235 (VIDEO/AUDIO DSP, D/A CONVERTER) | |
| | Schematic Diagram | 4-25 |
| | VC-235 (DV INTERFACE, OSD) | |
| | Schematic Diagram | 4-27 |
| | VC-235 (A/D CONVERTER, REC/PB AMP) | |
| | Schematic Diagram | 4-29 |
| | VC-235 (Hi8/Std8 PB AMP) Schematic Diagram | 4-31 |
| | VC-235 (HI CONTROL) Schematic Diagram | 4-33 |
| | VC-235 (Digital8 MECHANISM CONTROL) | |
| | Schematic Diagram | 4-35 |
| | VC-235 (CAMERA CONTROL, Hi8/Std8 MECHANISM CONTROL) Schematic Diagram | 4-37 |
| | FP-38, FP-220, FP-221, FP-249, FP-355, FP-356, | |
| | VC-235 (SERVO) Schematic Diagram | 4-39 |
| | FP-249, FP-355, FP-356 Printed Wiring Boards and | |
| | VC-235 (D/A CONVERTER) Schematic Diagram | 4-41 |
| | VC-235 (AUDIO IN/OUT) Schematic Diagram | 4-43 |
| | VC-235 (DC/DC CONVERTER) | |
| | Schematic Diagram | 4-45 |
| | PC-77 (DIGITAL STILL CONTROL), FP-162 | |
| | Schematic Diagram | 4-47 |
| | PC-77 (STILL PICTURE SIGNAL PROCESS) | |
| | Schematic Diagram | 4-49 |
| | PC-77 (DC/DC CONVERTER) | |
| | Schematic Diagram | 4-51 |
| | PC-77 Printed Wiring Board | 4-53 |
| | SE-104/112/114 Printed Wiring Board | 4-55 |
| | SE-104/112/114 Schematic Diagram | 4-57 |
| | FP-156, MI-37 Printed Wiring Boards | 4-59 |
| | FP-156, MI-37 (STEREO MIC AMP) | |
| | Schematic Diagram | 4-63 |
| | MI-37 (IR TRANSMITTER) Schematic Diagram | 4-65 |
| | CF-69 Printed Wiring Board | 4-67 |
| | MF-10000, CF-69 Schematic Diagram | 4-71 |
| | MF-10000, CF-70 Schematic Diagram | 4-73 |
| | CF-70 Printed Wiring Board | 4-75 |
| | CF-72 Printed Wiring Board | 4-79 |
| | MF-10000, CF-72 Schematic Diagram | 4-83 |
| | KP-009 Printed Wiring Board and | |
| | Schematic Diagram | 4-85 |
| | FK-10000 Schematic Diagram | 4-87 |
| | VF-129 Printed Wiring Board | 4-88 |
| | VF-129 Schematic Diagram | 4-89 |
| | VF-141 Printed Wiring Board | 4-91 |
| | VF-141 Schematic Diagram | 4-93 |
| | LB-62 Printed Wiring Board | 4-95 |
| | LB-62 Schematic Diagram | 4-97 |
| | PD-117 Printed Wiring Board | 4-99 |
| | PD-117 (RGB LCD DRIVER, TIMING GENERATOR) | |
| | Schematic Diagram | 4-103 |
| | PR-10000, PD-117 (CG LCD DRIVER, BACK LIGHT) | |
| | Schematic Diagram | 4-105 |
| | PD-118 Printed Wiring Board | 4-107 |
| | PD-118 (RGB LCD DRIVER, TIMING GENERATOR), | |
| | BV-10000, PR-10000 Schematic Diagram | 4-111 |
| | PR-10000, PD-118 (CG LCD DRIVER, BACK LIGHT) | |
| | Schematic Diagram | 4-113 |
| | FU-138/142/144 Printed Wiring Board | 4-115 |
| | SS-10000, FU-138/142/144 Schematic Diagram | 4-117 |
| 4-3. | Waveforms | 4-119 |
| 4-4. | Parts Location | 4-124 |

5. ADJUSTMENTS

| | | |
|------|--|-----|
| 1. | Before Starting Adjustment | 5-1 |
| 1-1. | Adjusting Items | |
| | when Replacing Main Parts and Boards | 5-2 |
| 5-1. | Camera Section Adjustment | 5-4 |

| <u>Section</u> | <u>Title</u> | <u>Page</u> |
|----------------|--|-------------|
| 1-1. | Preparations Before Adjustment | |
| | (Camera Section) | 5-4 |
| 1-1-1. | List of Service Tools | 5-4 |
| 1-1-2. | Preparations | 5-5 |
| 1-1-3. | Precaution | 5-9 |
| | 1. Setting the Switch | 5-9 |
| | 2. Order of Adjustments | 5-9 |
| | 3. Subjects | 5-9 |
| 1-2. | Initialization of 7, 8, C, D, E, F Page Data | |
| | and Modification of B Page Data | 5-10 |
| 1-2-1. | Initialization of 8, C, D Page Data | 5-10 |
| | 1. Initializing the 8, C, D Page Data | 5-10 |
| | 2. Modification of 8, C, D Page Data | 5-10 |
| | 3. 8 Page Table | 5-10 |
| | 4. C Page Table | 5-11 |
| | 5. D Page Table | 5-12 |
| 1-2-2. | Initialization of 7, E, F Page Data | 5-13 |
| | 1. Initializing the 7, E, F Page Data | 5-13 |
| | 2. Modification of 7, E, F Page Data | 5-13 |
| | 3. 7 Page Table | 5-13 |
| | 4. E Page Table | 5-14 |
| | 5. F Page Table | 5-15 |
| 1-2-3. | Modification of B Page Data | 5-16 |
| | 1. Modification of B Page Data | 5-16 |
| | 2. B Page Table | 5-16 |
| 1-3. | Camera System Adjustments | 5-16 |
| | 1. HALL Adjustment | 5-16 |
| | 2. Flange Back Adjustment | |
| | (Using the Minipattern Box) | 5-17 |
| | 3. Flange Back Adjustment | |
| | (Using Flange Back Adjustment Chart Subject | |
| | More Than 500 m Away) | 5-18 |
| 3-1. | Flange Back Adjustment (1) | 5-18 |
| 3-2. | Flange Back Adjustment (2) | 5-18 |
| | 4. Flange Back Check | 5-19 |
| | 5. Optical Axis Adjustment | 5-20 |
| | 6. Picture Frame Setting | 5-21 |
| | 7. Color Reproduction Adjustment | 5-22 |
| | 8. AWB & LV Standard Data Input | 5-23 |
| | 9. Auto White Balance Adjustment | 5-23 |
| | 10. White Balance Check | 5-24 |
| | 11. Angular Velocity Sensor Sensitivity Data Preset | |
| | and SteadyShot Check | 5-25 |
| 1-4. | Monochrome CRT Electronic Viewfinder | |
| | System Adjustments | 5-26 |
| 1-4-1. | Horizontal Slant Check | 5-26 |
| 1-4-2. | Centering Adjustment | 5-26 |
| 1-4-3. | Focus Adjustment | 5-26 |
| 1-4-4. | Aberration Adjustment | 5-27 |
| 1-4-5. | Horizontal Amplitude Adjustment (VF-129 Board) | 5-27 |
| 1-4-6. | Vertical Amplitude Adjustment (VF-129 Board) | 5-28 |
| 1-4-7. | Brightness Adjustment (VF-129 Board) | 5-28 |
| 1-4-8. | Horizontal Amplitude, Vertical Amplitude, | |
| | Focus Check | 5-28 |
| 1-5. | LCD Electronic Viewfinder | |
| | System Adjustments | 5-29 |
| | 1. EVF Initial Data Input (1) | 5-29 |
| | 2. EVF Initial Data Input (2) | 5-30 |
| | 3. VCO Adjustment (VF-141 Board) | 5-30 |
| | 4. RGB AMP Adjustment (VF-141 Board) | 5-31 |
| | 5. Contrast Adjustment (VF-141 Board) | 5-31 |
| | 6. Backlight Consumption Current Adjustment | |
| | (VF-141 Board) | 5-32 |
| | 7. White Balance Adjustment (VF-141 Board) | 5-32 |
| 1-6. | LCD System Adjustments | 5-33 |
| | 1. LCD Initial Data Input (1) | 5-33 |
| | 2. LCD Initial Data Input (2) | 5-34 |
| | 3. VCO Adjustment (PD-117/118 Board) | 5-34 |
| | 4. RGB AMP Adjustment (PD-117/118 Board) | 5-35 |
| | 5. Contrast Adjustment (PD-117/118 Board) | 5-35 |
| | 6. COM AMP Adjustment (PD-117/118 Board) | 5-36 |
| | 7. V-COM Adjustment (PD-117/118 Board) | 5-36 |
| | 8. White Balance Adjustment | |
| | (PD-117/118 Board) | 5-37 |

| <u>Section</u> | <u>Title</u> | <u>Page</u> | <u>Section</u> | <u>Title</u> | <u>Page</u> |
|----------------|--|-------------|----------------|---------------------------------------|-------------|
| 5-2. | MECHANISM SECTION ADJUSTMENT | 5-38 | 4-3. | Service Mode | 5-62 |
| 2-1. | Hi8/Standard 8 mm Mode | 5-38 | 1. | Setting the Test Mode | 5-62 |
| 2-1-1. | How to Enter Playback Mode Without Cassette ... | 5-38 | 2. | Emergence Memory Address | 5-62 |
| 2-1-2. | Tape Path Adjustment | 5-38 | 2-1. | C Page Emergence Memory Address | 5-62 |
| 1. | Preparations for Adjustment | 5-38 | 2-2. | F Page Emergence Memory Address | 5-63 |
| 2-2. | Digital8 Mode | 5-39 | 2-3. | EMG Code (Emergency Code) | 5-63 |
| 2-2-1. | How to Enter Record Mode Without Cassette | 5-39 | 2-4. | MSW Code | 5-64 |
| 2-2-2. | How to Enter Playback Mode Without Cassette ... | 5-39 | 3. | Bit Value Discrimination | 5-65 |
| 2-2-3. | Overall Tape Path Check | 5-39 | 4. | Input/output Check | 5-65 |
| 1. | Recording of the Tape Path Check Signal | 5-39 | 5. | LED, LCD (Display Window) Check | 5-65 |
| 2. | Tape Path Check | 5-39 | 6. | Record of Use Check | 5-66 |
| 5-3. | Video Section Adjustment | 5-40 | 7. | Switch Check (1) | 5-66 |
| 3-1. | Preparations Before Adjustments | 5-40 | 8. | Switch Check (2) | 5-67 |
| 3-1-1. | Equipment to Required | 5-40 | 9. | Headphone Jack Check | 5-68 |
| 3-1-2. | Precautions on Adjusting | 5-41 | | | |
| 3-1-3. | Adjusting Connectors | 5-42 | 6. | REPAIR PARTS LIST | |
| 3-1-4. | Connecting the Equipment | 5-42 | 6-1. | Exploded Views | 6-1 |
| 3-1-5. | Alignment Tape | 5-43 | 6-1-1. | Front Panel Section | 6-1 |
| 3-1-6. | Input/output Level and Impedance | 5-44 | 6-1-2. | Cabinet (R) Section | |
| 3-2. | System Control System Adjustment | 5-45 | | (TRV320/TRV320E/TRV320P) | 6-2 |
| 1. | Initialization of 7, 8, C, D, E, F Page Data | 5-45 | 6-1-3. | 2.5 LCD Assembly Section | |
| 2. | Node Unique ID No. Input | 5-45 | | (TRV320/TRV320E/TRV320P) | 6-3 |
| 2-1. | Input of Company ID | 5-45 | 6-1-4. | Cabinet (R) Section (3/3.5 LCD Model) | |
| 2-2. | Input of Serial No. | 5-45 | | (TRV420E/TRV520/TRV520E/TRV520P/ | |
| 3. | Battery End Adjustment (VC-235 Board) | 5-47 | | TRV525/TRV620E) | 6-4 |
| 3-3. | Servo and RF System Adjustments | 5-48 | 6-1-5. | 3/3.5 LCD Assembly Section | |
| 1. | REEL FG Adjustment (VC-235 Board) | 5-48 | | (TRV420E/TRV520/TRV520E/TRV520P/ | |
| 2. | PLL f_0 & LPF f_0 Pre-adjustment (VC-235 Board) .. | 5-48 | | TRV525/TRV620E) | 6-5 |
| 3. | Switching Position Adjustment (VC-235 Board) ... | 5-49 | 6-1-6. | Cabinet (R) Section (4 LCD Model) | |
| 4. | AGC Center Level Adjustment (VC-235 Board) ... | 5-49 | | (TRV720/TRV720E) | 6-6 |
| 5. | APC & AEQ Adjustment (VC-235 Board) | 5-50 | 6-1-7. | 4 LCD Assembly Section | |
| 6. | PLL f_0 & LPF f_0 Final Adjustment | | | (TRV720/TRV720E) | 6-7 |
| | (VC-235 Board) | 5-50 | 6-1-8. | CRT EVF Block Section | 6-8 |
| 7. | Hi8/standard 8 mm Switching Position | | 6-1-9. | LCD EVF Block Section | 6-9 |
| | Adjustment (VC-235 Board) | 5-51 | 6-1-10. | Cabinet (L) Section | 6-10 |
| 8. | CAP FG Duty Adjustment (VC-235 Board) | 5-51 | 6-1-11. | Lens Block Section | 6-11 |
| 3-4. | Video System Adjustments | 5-52 | 6-1-12. | Main Board Section | 6-12 |
| 3-4-1. | Video System Adjustments | 5-52 | 6-1-13. | Cassette Compartment Assembly | 6-13 |
| 1. | 27 MHz/36 MHz Origin Oscillation Adjustment | | 6-1-14. | LS Chassis Assembly | 6-14 |
| | (VC-235 Board) | 5-52 | 6-1-15. | Mechanism Chassis Assembly | 6-15 |
| 2. | Chroma BPF f_0 Adjustment (VC-235 Board) | 5-52 | 6-2. | Electrical Parts List | 6-16 |
| 3. | S VIDEO OUT Y Level Adjustment | | | | |
| | (VC-235 Board) | 5-53 | | | |
| 4. | S VIDEO OUT Chroma Level Adjustment | | | | |
| | (VC-235 Board) | 5-53 | | | |
| 5. | VIDEO OUT Y, Chroma Level Check | | | | |
| | (VC-235 Board) | 5-54 | | | |
| 6. | Hi8/standard 8 mm AFC f_0 Adjustment | | | | |
| | (VC-235 Board) (Using Digital Voltmeter) | 5-54 | | | |
| 7. | Hi8/standard 8 mm AFC f_0 Adjustment | | | | |
| | (VC-235 Board) (Auto Adjustment) | 5-54 | | | |
| 3-5. | IR Transmitter Adjustments | 5-55 | | | |
| 1. | IR Video Carrier Frequency Adjustment | | | | |
| | (MI-37 Board) | 5-55 | | | |
| 2. | IR Video Deviation Adjustment (MI-37 Board) | 5-55 | | | |
| 3. | IR Audio Deviation Adjustment (MI-37 Board) | 5-56 | | | |
| 3-6. | Audio System Adjustments | 5-57 | | | |
| 1. | Hi8/standard 8 mm AFM BPF f_0 Adjustment | | | | |
| | (VC-235 Board) | 5-57 | | | |
| 2. | Hi8/standard 8 mm AFM 1.5 MHz Deviation | | | | |
| | Adjustment (VC-235 Board) | 5-58 | | | |
| 3. | Hi8/standard 8 mm AFM 1.7 MHz | | | | |
| | Deviation Adjustment (VC-235 Board) | 5-58 | | | |
| 4. | Digital8 Playback Level Check | 5-58 | | | |
| 5. | Overall Level Characteristics Check | 5-58 | | | |
| 6. | Overall Distortion Check | 5-58 | | | |
| 7. | Overall Noise Level Check | 5-59 | | | |
| 8. | Overall Separation Check | 5-59 | | | |
| 5-4. | SERVICE MODE | 5-60 | | | |
| 4-1. | Adjustment Remote Commander | 5-60 | | | |
| 1. | Using the Adjustment Remote Commander | 5-60 | | | |
| 2. | Precautions Upon Using the Adjustment Remote | | | | |
| | Commander | 5-60 | | | |
| 4-2. | Data Process | 5-61 | | | |

* The optical axis frame is shown on page 321.
The color reproduction frame is shown on page 322.
The parts reference sheet is shown on page 323 .

SERVICE NOTE

1. POWER SUPPLY DURING REPAIRS

In this unit, about 10 seconds after power is supplied (8.4 V) to the battery terminal using the service power cord (J-6082-223-A), the power is shut off so that the unit cannot operate.

The following two methods are available to prevent this. Take note of which to use during repairs.

Method 1.

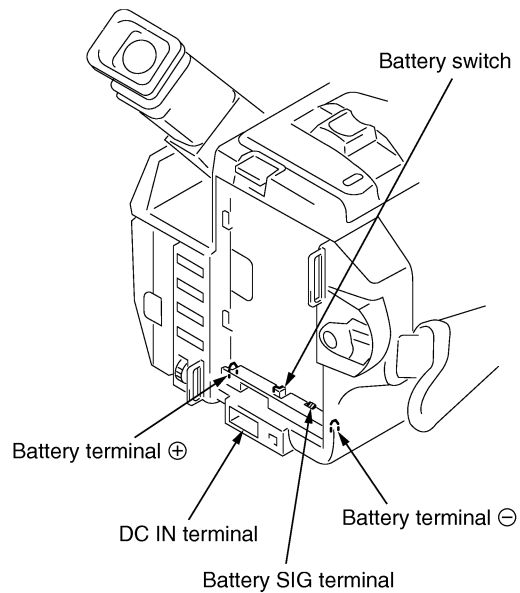
Connect the servicing remote commander RM-95 (J-6082-053-B) to the LANC jack, and set the remote commander switch to the "ADJ" side.

Method 2.

Press the battery switch of the battery terminal using adhesive tape, etc.

Method 3.

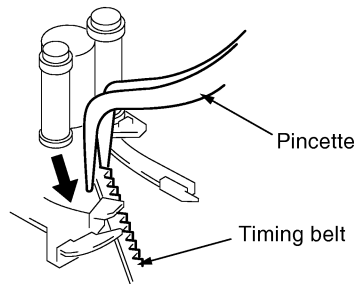
Use the DC IN terminal. (Use the AC power adaptor.)



2. TO TAKE OUT A CASSETTE WHEN NOT EJECT (FORCE EJECT)

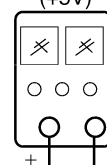
- ① Refer to 2-4 to remove the front panel assembly.
- ② Refer to 2-5 to remove the cabinet (L) assembly.
- ③ Refer to 2-6 to remove the cabinet (R) assembly.
- ④ Refer to 2-15 to remove the battery panel assembly.
- ⑤ Disconnect CN4401 of VC-235 board.
- ⑥ Add +5 V from the DC POWER SUPPLY and unload with a pressing the cassette lid.

- ⑦ Pull the timing belt in the direction of the arrow with a pincette while pressing the cassette lid (be careful not to damage it) to adjust the bending of a tape.

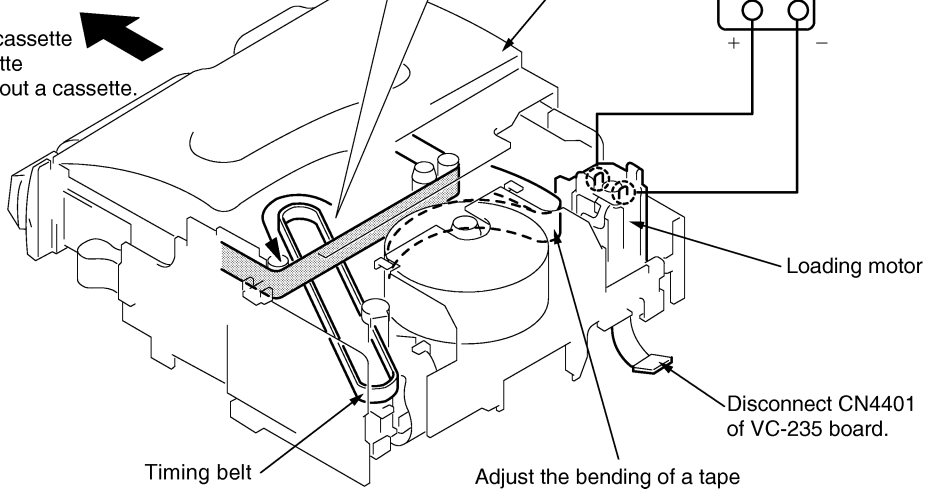


Press the cassette lid to rise the cassette compartment

[DC power supply] (+5V)

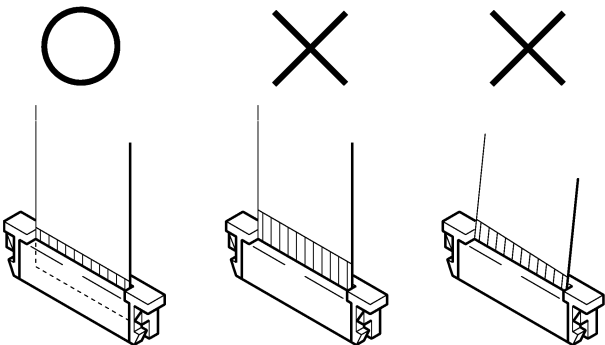


- ⑧ Let go your hold the cassette lid and rise the cassette compartment to take out a cassette.

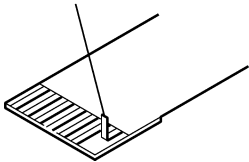


3. NOTE FOR REPAIR

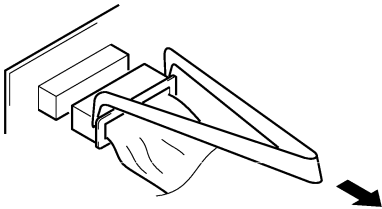
Make sure that the flat cable and flexible board are not cracked of bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



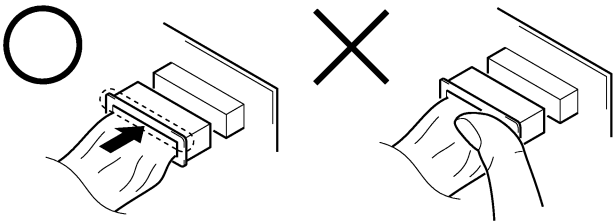
Cut and remove the part of gilt which comes off at the point.
(Be careful or some pieces of gilt may be left inside)



When remove a connector, don't pull at wire of connector.
It is possible that a wire is snapped.



When installing a connector, don't press down at wire of connector.
It is possible that a wire is snapped.



4. LCD TYPE CHECK

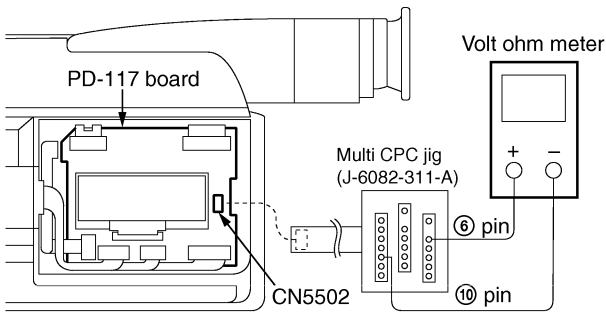
By measuring the resistor value between Pin ⑥ of CN5502 and Pin ⑩ of CN5502 on PD-117/118 board, the type of LCD can be discriminated.

Note: About PD-117/118 board and LCD module, discriminate LCD type on the machine, and replace the same type.

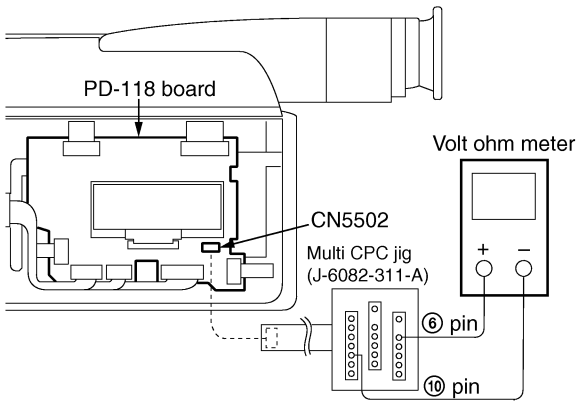
PD-117/118 board CN5502

| Resistor value | LCD type | PD board |
|----------------|----------------------|-------------------------------|
| 1 kΩ | 2.5 LCD TYPE S 61 k | PD-117 (2.5 LCD TYPE S 61 k) |
| 1.5 kΩ | 2.5 LCD TYPE C 61 k | PD-117 (2.5 LCD TYPE C 61 k) |
| 2.2 kΩ | 2.5 LCD TYPE S 123 k | PD-117 (2.5 LCD TYPE S 123 k) |
| 4.7 kΩ | 3 LCD TYPE S | PD-118 (3 LCD TYPE S) |
| 5.6 kΩ | 3.5 LCD TYPE S | PD-118 (3.5 LCD TYPE S) |
| 6.8 kΩ | 3.5 LCD TYPE C | PD-118 (3.5 LCD TYPE C) |
| 8.2 kΩ | 4 LCD TYPE S | PD-118 (4 LCD TYPE S) |
| 10 kΩ | 4 LCD TYPE C | PD-118 (4 LCD TYPE C) |

DCR-TRV320/TRV320E/TRV320P



DCR-TRV420E/TRV520/TRV520E/TRV520P/
TRV525/TRV620E/TRV720/TRV720E



SELF-DIAGNOSIS FUNCTION

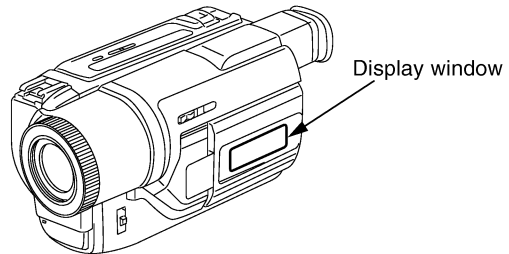
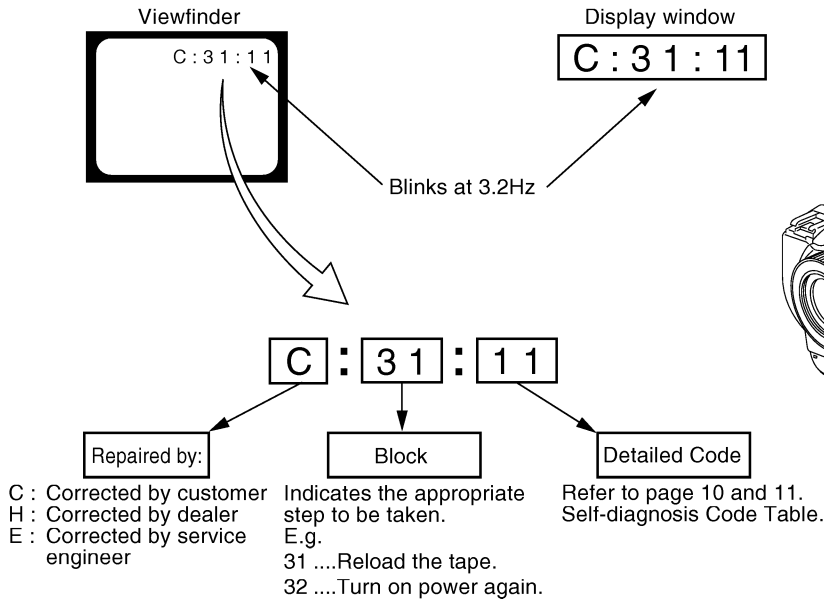
1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the viewfinder or Display window what to do. This function consists of two display; self-diagnosis display and service mode display.

Details of the self-diagnosis functions are provided in the Instruction manual.

2. Self-diagnosis Display

When problems occur while the unit is operating, the counter of the viewfinder or Display window shows a 4-digit display consisting of an alphabet and numbers, which blinks at 3.2 Hz. This 5-character display indicates the “repaired by:”, “block” in which the problem occurred, and “detailed code” of the problem.

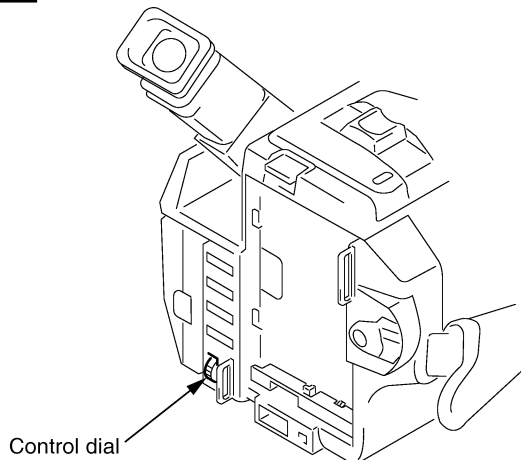
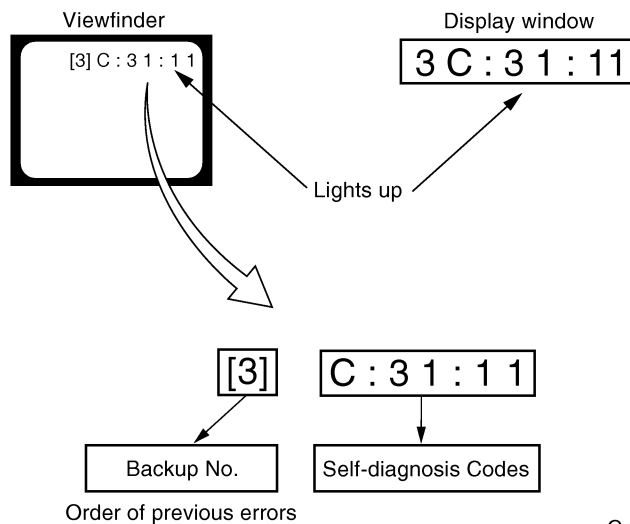


3. Service Mode Display

The service mode display shows up to six self-diagnosis codes shown in the past.

3-1. Display Method

While pressing the “STOP” key, set the switch from OFF to “VTR or PLAYER”, and continue pressing the “STOP” key for 5 seconds continuously. The service mode will be displayed, and the counter will show the backup No. and the 5-character self-diagnosis codes.



3-2. Switching of Backup No.

By rotating the control dial, past self-diagnosis codes will be shown in order. The backup No. in the [] indicates the order in which the problem occurred. (If the number of problems which occurred is less than 6, only the number of problems which occurred will be shown.)

- | | |
|----------------------------|------------------------------|
| [1] : Occurred first time | [4] : Occurred fourth time |
| [2] : Occurred second time | [5] : Occurred fifth time |
| [3] : Occurred third time | [6] : Occurred the last time |

3-3. End of Display

Turning OFF the power supply will end the service mode display.

Note: The “self-diagnosis display” data will be backed up by the coin-type lithium battery (CF-69/70/72 board BH001). When this coin-type lithium battery is disconnected, the “self-diagnosis display” data will be lost by initialization.

4. Self-diagnosis Code Table

| Self-diagnosis Code | | | | Symptom/State | Correction |
|---------------------|----------------|---------------|--|---|--|
| Repaired by: | Block Function | Detailed Code | | | |
| C | 2 1 | 0 0 | | Condensation. | Remove the cassette, and insert it again after one hour. |
| C | 2 2 | 0 0 | | Video head is dirty. | Clean with the optional cleaning cassette. |
| C | 2 3 | 0 0 | | Non-standard battery is used. | Use the InfoLITHIUM battery. |
| C | 3 1 | 1 0 | | LOAD direction. Loading does not complete within specified time | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 1 1 | | UNLOAD direction. Loading does not complete within specified time | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 2 0 | | T reel side tape slacking when unloading. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 2 1 | | S reel side tape slacking when unloading. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 2 2 | | T reel fault. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 2 3 | | S reel fault. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 3 0 | | FG fault when starting capstan. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 3 1 | | FG fault during normal capstan operations. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 4 0 | | FG fault when starting drum. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 4 1 | | PG fault when starting drum. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 4 2 | | FG fault during normal drum operations. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 4 3 | | PG fault during normal drum operations. | Load the tape again, and perform operations from the beginning. |
| C | 3 1 | 4 4 | | Phase fault during normal drum operations. | Load the tape again, and perform operations from the beginning. |
| C | 3 2 | 1 0 | | LOAD direction loading motor time-out. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 1 1 | | UNLOAD direction loading motor time-out. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 2 0 | | T reel side tape slacking when unloading. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 2 1 | | S reel side tape slacking when unloading. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 2 2 | | T reel fault. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 2 3 | | S reel fault. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 3 0 | | FG fault when starting capstan. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 3 1 | | FG fault during normal capstan operations. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 4 0 | | FG fault when starting drum. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 4 1 | | PG fault when starting drum. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 4 2 | | FG fault during normal drum operations. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 4 3 | | PG fault during normal drum operations. | Remove the battery or power cable, connect, and perform operations from the beginning. |
| C | 3 2 | 4 4 | | Phase fault during normal drum operations. | Remove the battery or power cable, connect, and perform operations from the beginning. |

| Self-diagnosis Code | | | Symptom/State | Correction |
|---------------------|----------------|---------------|---|---|
| Repaired by: | Block Function | Detailed Code | | |
| E | 6 1 | 0 0 | Difficult to adjust focus (Cannot initialize focus) | Inspect the lens block focus reset sensor (Pin ⑨ of CN1551 of VC-235 board) when focusing is performed when the control dial is rotated in the focus manual mode and the focus motor drive circuit (IC1553 of VC-235 board) when the focusing is not performed. Note: Use the remote commander RM-95 only for the model without the focus dial. |
| E | 6 1 | 1 0 | Zoom operations fault (Cannot initialize zoom lens) | Inspect the lens block zoom reset sensor (Pin ⑩ of CN1551 of VC-235 board) when zooming is performed when the zoom lens is operated and the zoom motor drive circuit (IC1553 of VC-235 board) when zooming is not performed. |
| E | 6 2 | 0 0 | Handshake correction function does not work well. (With pitch angular velocity sensor output stopped) | Inspect pitch angular velocity sensor (SE201 of SE-104/112/114 board) peripheral circuits. |
| E | 6 2 | 0 1 | Handshake correction function does not work well. (With yaw angular velocity sensor output stopped) | Inspect yaw angular velocity sensor (SE202 of SE-104/112/114 board) peripheral circuits. |

DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 SECTION 1 GENERAL

This section is extracted from DCR-TRV420E/
TRV520E/TRV620E instruction manual.

English

Welcome!

Congratulations on your purchase of this Sony Digital Handycam camcorder. With your Digital Handycam, you can capture life's precious moments with superior picture and sound quality. Your Digital Handycam is loaded with advanced features, but at the same time it is very easy to use. You will soon be producing home video that you can enjoy for years to come.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet.
Refer servicing to qualified personnel only.

NOTICE ON THE SUPPLIED AC POWER ADAPTOR FOR CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362 (i.e., marked with ⚡ or ⚡ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

ATTENTION

The electromagnetic fields at the specific frequencies may influence the picture and sound of this digital camcorder.

For the customers in Germany

Directive: EMC Directive 89/336/EEC.

92/31/EEC

This equipment complies with the EMC regulations when used under the following circumstances:

- Residential area
- Business district
- Light-industry district

(This equipment complies with the EMC standard regulations EN55022 Class B.)

Русский

Добро пожаловать!

Поздравляем Вас с приобретением данной видеокамеры Digital Handycam фирмы Sony. С помощью Вашей видеокамеры Digital Handycam Вы сможете запечатлеть дорогие Вам мгновения жизни с превосходным качеством изображения и звука. Ваша видеокамера Digital Handycam оснащена усовершенствованными функциями, но в то же время ее очень легко использовать. Вскоре Вы будете создавать семейные видеопрограммы, которыми можете наслаждаться последующие годы.

ПРЕДУПРЕЖДЕНИЕ

Для предотвращения возгорания или опасности электрического удара не выставляйте аппарат на дождь или влагу.

Во избежание поражения электрическим током не открывайте корпус. За обслуживанием обращайтесь только к квалифицированному обслуживающему персоналу.

ВНИМАНИЕ

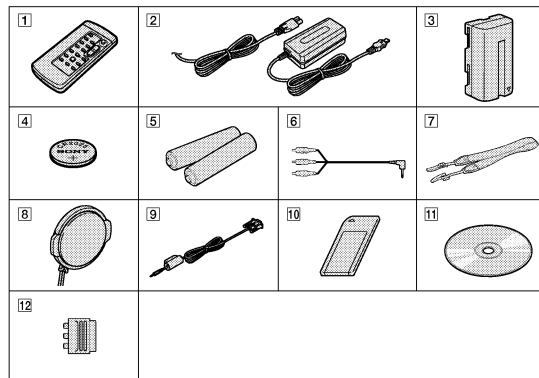
Электромагнитные поля на определенных частотах могут влиять на изображение и звук, воспроизводимые данной цифровой видеокамерой.



A946

Checking supplied accessories

Make sure that the following accessories are supplied with your camcorder.



- 1 Wireless Remote Commander (1) (p. 170)
- 2 AC-L10A/L10B/L10C AC power adaptor (1), Mains lead (1) (p. 13)
- 3 NP-F330 battery pack (1) (p. 12, 13)
DCR-TRV520E/TRV620E
NP-F550 battery pack (1) (p. 12, 13)
DCR-TRV420E
- 4 CR2025 lithium battery (1) (p. 139)
The lithium battery is already installed in your camcorder.
- 5 R6 (Size AA) battery for Remote Commander (2) (p. 171)
- 6 A/V connecting cable (1) (p. 38)
- 7 Shoulder strap (1) (p. 167)
- 8 Lens cap (1) (p. 21)
- 9 PC serial cable (1) (p. 122)
- 10 "Memory Stick" (1) (p. 100)
- 11 Application software: PictureGear 4.1 Lite (CD-ROM) (1) (p. 122)
- 12 21-pin adaptor (1) (p. 39)

Contents of the recording cannot be compensated if recording or playback is not made due to a malfunction of the camcorder, video tape, etc.

Проверка прилагаемых принадлежностей

Убедитесь, что следующие принадлежности прилагаются к Вашей видеокамере.

- 1 Беспроводный пульт дистанционного управления (1) (стр. 170)
- 2 Сетевой адаптер переменного тока AC-L10A/L10B/L10C (1) (стр. 13)
- 3 Батарейный блок NP-F330 (1) (стр. 12, 13)
DCR-TRV520E/TRV620E
Батарейный блок NP-F550 (1) (стр. 12, 13)
DCR-TRV420E
- 4 Литиевая батарейка CR2025 (1) (стр. 139)
Литиевая батарейка уже установлена в Вашей видеокамере.
- 5 Батарейка R6 (размера AA) для пульта дистанционного управления (2) (стр. 171)
- 6 Соединительный кабель аудио/видео (1) (стр. 38)
- 7 Плечевой ремень (1) (стр. 167)
- 8 Крышка объектива (1) (стр. 21)
- 9 Кабель для последовательного подсоединения к ПК (1) (стр. 122)
- 10 "Memory Stick" (1) (стр. 100)
- 11 Прикладное программное обеспечение: PictureGear 4.1 Lite (CD-ROM) (1) (стр. 122)
- 12 21-штырьковый адаптер (1) (стр. 39)

Содержание записи не может быть компенсировано в случае, если запись или воспроизведение не выполнены из-за неисправности видеокамеры, видеоленты и т.п.

2

5

English

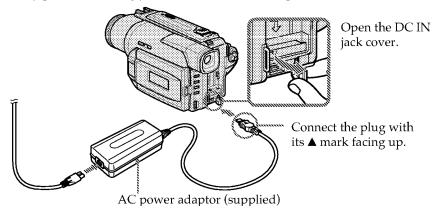
Quick Start Guide



This chapter introduces you to the basic features of your camcorder. See the page in parentheses "()" for more information.

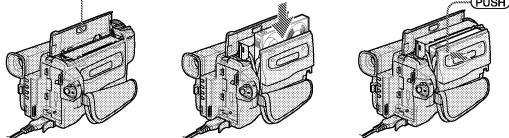
1 Connecting the mains lead (p. 18)

Use the battery pack when using your camcorder outdoors (p. 12).



2 Inserting a cassette (p. 19)

- 1 Open the lid of the cassette compartment, and press EJECT. The compartment opens automatically.
- 2 Insert a cassette into the cassette compartment with its window facing out and the write-protect tab on the cassette up.
- 3 Close the cassette compartment by pressing the (PUSH) mark on the cassette compartment. The cassette compartment automatically goes down. Close the lid of the cassette compartment.



3 Recording a picture (p. 21)

- 1 Remove the lens cap.
- 2 Set the POWER switch to CAMERA while pressing the small green button.
- 3 Open the LCD panel while pressing OPEN. The picture appears on the LCD screen.
- 4 Press the red button. Your camcorder starts recording. To stop recording, press the red button again.

Viewfinder
When the LCD panel is closed, use the viewfinder placing your eye against its eyecup. The picture in the viewfinder is black and white (DCR-TRV420E/TRV520E only).

4 Monitoring the playback picture on the LCD screen (p. 33)

- 1 Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E) while pressing the small green button.
- 2 Press ◀ to rewind the tape.
- 3 Press ▶ to start playback.

Note
Do not pick up your camcorder by holding the viewfinder, the LCD panel or the battery pack.



6

7

Using this manual

The instructions in this manual are for the three models listed in the table below. Before you start reading this manual and operating your camcorder, check the model number by looking at the bottom of your camcorder. The DCR-TRV620E is the model used for illustration purposes. Otherwise, the model name is indicated in the illustrations. Any differences in operation are clearly indicated in the text, for example, "DCR-TRV620E only."

As you read through this manual, buttons and settings on your camcorder are shown in capital letters.

e.g. Set the POWER switch to CAMERA.

When you carry out an operation, you can hear a beep sound to indicate that the operation is being carried out.

Types of differences/Типы различий

| DCR- | TRV420E | TRV520E | TRV620E |
|-------------------------------------|---------|---------|---------|
| Viewfinder/Видоискатель | B/W | B/W | colour |
| Digital zoom/Цифровой вариообъектив | 125x | 100x | 100x |
| POWER switch/Переключатель POWER | PLAYER | PLAYER | VTR* |

* The models which have VTR mode on the POWER switch can record pictures from other equipment such as VCR.

Before using your camcorder

With your digital camcorder, you can use Hi8 Hi8/Digital8 video cassettes. Your camcorder records and plays back pictures in the Digital8 system. Also, your camcorder plays back tapes recorded in the Hi8/standard 8 (analog) system. You, however, cannot use the functions in "Advanced Playback Operations" on page 64 to 72 for playback in the Hi8/standard 8 system. To enable smooth transition, we recommend that you do not mix pictures recorded in the Hi8/standard 8 with the Digital8 system on a tape.

Использование данного руководства

Инструкции в данном руководстве предназначены для трех моделей, перечисленных в таблице ниже. Перед тем, как прочесть данное руководство и начать эксплуатацию Вашей видеокамеры, проверьте номер модели на нижней стороне Вашей видеокамеры. В качестве иллюстративных целей используется модель DCR-TRV620E. В других случаях номер модели указан на рисунках. Какие-либо расхождения в эксплуатации четко указаны в тексте, например, "только DCR-TRV620E." При чтении данного руководства учитывайте, что кнопки и установки на видеокамере показаны заглавными буквами.

Прим. Установите выключатель POWER в положение CAMERA.

При выполнении операции на видеокамере Вы сможете услышать зуммерный сигнал, подтверждающий выполнение операции.

| DCR- | TRV420E | TRV520E | TRV620E |
|------------------------|---------|---------|---------|
| Видоискатель | Б/Б | Б/Б | цвет |
| Цифровой вариообъектив | 125х | 100х | 100х |
| Переключатель POWER | ПЛЕЙЕР | ПЛЕЙЕР | ВТР* |

* Модели, в которых имеется режим VTR на переключателе POWER, могут записывать изображения с другого оборудования, как, например VCR.

Перед началом эксплуатации Вашей видеокамеры

Для Вашей цифровой видеокамеры Вы можете использовать видеокассеты Hi8 Hi8/Digital8. Ваша видеокамера записывает и воспроизводит изображения в цифровой системе Digital8. Также, Ваша видеокамера воспроизводит ленты, записанные в системе Hi8/стандартной системе 8 (аналоговой). Однако, Вы не можете использовать функции в разделе "Усовершенствованные операции воспроизведения" на страницах с 64 по 72 для воспроизведения в системе Hi8/стандартной системе 8. Для обеспечения плавного перехода рекомендуется не смешивать на ленте изображения, записанные в системе Hi8/стандартной системе 8 с изображениями, записанными в цифровой системе Digital8.

Using this manual

Note on TV colour systems

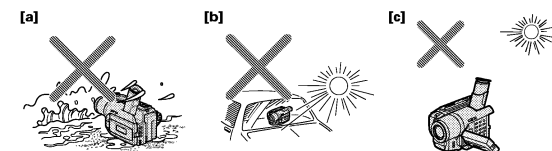
TV colour systems differ from country to country. To view your recordings on a TV, you need a PAL system-based TV.

Copyright precautions

Television programmes, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

Precautions on camcorder care

- The LCD screen and the viewfinder are manufactured using high-precision technology. However, there may be some tiny black points and/or bright points (red, blue, green or white) that constantly appear on the LCD screen and in the viewfinder. These points occur normally in the manufacturing process and do not affect the recorded picture in any way. Effective ratio of pixels and/or screen are 99.99% or more.
- Do not let your camcorder get wet. Keep your camcorder away from rain and sea water. Letting your camcorder get wet may cause your camcorder to malfunction. Sometimes this malfunction cannot be repaired [a].
- Never leave your camcorder exposed to temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight [b].
- Do not place your camcorder so as to point the viewfinder, the LCD screen or lens toward the sun. The inside of the viewfinder, LCD screen or lens may be damaged [c].



Использование данного руководства

Примечание по системам цветного телевидения

Системы цветного телевидения отличаются в зависимости от страны. Для просмотра Ваших записей на экране телевизора Вам необходимо использовать телевизор, основанный на системе PAL.

Предостережение об авторском праве

Телевизионные программы, кинофильмы, видеопленки и другие материалы могут быть защищены авторским правом. Нелегализованная запись таких материалов может противоречить положениям закона об авторском праве.

Меры предосторожности при уходе за видеокамерой

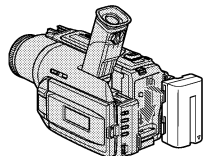
- Экран ЖКД и видоискатель изготовлены с помощью высокоточной технологии. Однако на экране ЖКД и в видоискателе могут постоянно появляться черные и/или яркие цветные точки (красные, синие, зеленые или белые). Появление этих точек вполне нормально для процесса съемки и никоим образом не влияет на записываемое изображение. Свыше 99,99% экрана предназначено для эффективного использования.
- Не допускайте, чтобы видеокамера становилась влажной. Предотвратите видеокамеру от дождя и морской воды. Если Вы намочите видеокамеру, то это может привести к неисправности аппарата, которая не всегда может быть устранена [a].
- Никогда не оставляйте видеокамеру в месте с температурой выше 60°C (140°F), как, например, в автомобиле, оставленном на солнце или под прямым солнечным светом [b].
- Не располагайте свою видеокамеру таким образом, чтобы видоискатель, экран ЖКД или объектив были направлены на солнце. Иначе может быть повреждено внутреннее устройство видоискателя, экрана ЖКД или объектива [c].

Step 1 Preparing the power supply

Installing the battery pack

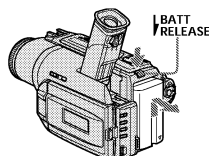
Install the battery pack to use your camcorder outdoors.

Slide the battery pack down until it clicks.



To remove the battery pack

Slide the battery pack out in the direction of the arrow while pressing BATT RELEASE down.



After installing the battery pack

Do not carry your camcorder by holding the battery pack. If you do so, the battery pack may slide off your camcorder unintentionally, damaging your camcorder.

Пункт 1 Подготовка источника питания

Установка батарейного блока

Установите батарейный блок для того, чтобы использовать Вашу видеокамеру вне помещения.

Передвиньте батарейный блок вниз, так чтобы он защелкнулся на месте.

Для снятия батарейного блока

Передвиньте батарейный блок в направлении стрелки, нажав кнопку BATT RELEASE вниз.

После установки батарейного блока

Не переносите свою видеокамеру, взявшись за батарейный блок. Если Вы так сделаете, батарейный блок может произвольно соскользнуть с Вашей видеокамеры и повредить ее.

Step 1 Preparing the power supply

Charging the battery pack

Use the battery pack after charging it for your camcorder.

Your camcorder operates only with the "InfoLITHIUM" battery pack (L series).

- Open the DC IN jack cover and connect the AC power adaptor supplied with your camcorder to the DC IN jack with the plug's mark facing up.
- Connect the mains lead to the AC power adaptor.
- Connect the mains lead to the mains.
- Set the POWER switch to OFF (CHARGE). Charging begins. The remaining battery time is indicated in minutes on the display window.

When the remaining battery indicator changes to , normal charge is completed. To fully charge the battery (full charge), leave the battery pack attached for about 1 hour after normal charge is completed until FULL appears in the display window. Fully charging the battery allows you to use the battery longer than usual.

Пункт 1 Подготовка источника питания

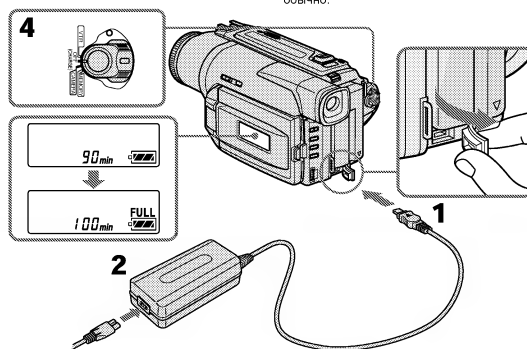
Зарядка батарейного блока

Используйте батарейный блок для Вашей видеокамеры после его зарядки.

Ваша видеокамера работает только с батарейным блоком "InfoLITHIUM" (серии L).

- Откройте крышку гнезда DC IN и подсоедините сетевой адаптер переменного тока, прилагаемый к Вашей видеокамере, к гнезду DC IN, так чтобы штекер был направлен вверх.
- Подсоедините провод электропитания к сетевому адаптеру переменного тока.
- Подсоедините провод электропитания к сетевой розетке.
- Установите переключатель POWER в положение OFF (CHARGE). Начнется зарядка. В окошке дисплея будет отображаться время оставшегося заряда в минутах.

Если индикатор оставшегося заряда изменится на , это значит, что нормальная зарядка завершена. Для полной зарядки батарейного блока (полная зарядка) оставьте батарейный блок прикрепленным на месте приблизительно на один час после завершения нормальной зарядки до тех пор, пока в окошке дисплея не появится индикация FULL. Полная зарядка батарейного блока позволяет Вам использовать батарейный блок дольше чем обычно.



Step 1 Preparing the power supply

After charging the battery pack

Disconnect the AC power adaptor from the DC IN jack on your camcorder.

Notes

- Prevent metallic objects from coming into contact with the metal parts of the DC plug of the AC power adaptor. This may cause a short-circuit, damaging the AC power adaptor.
- Keep the battery pack dry.
- When the battery pack is not to be used for a long time, charge the battery pack once fully, and then use it until it fully discharges again. Keep the battery pack in a cool place.

When the battery pack is charged fully

The LCD backlight of the display window is turned off.

Remaining battery time indicator

The remaining battery time indicator in the display window roughly indicates the recording time with the viewfinder.

Battery pack

The supplied battery pack is charged a little.

Until your camcorder calculates the actual remaining battery time

"--- min" appears in the display window.

While charging the battery pack, no indicator appears or the indicator flashes in the display window in the following cases:

- The battery pack is not installed correctly.
- The AC power adaptor is disconnected.
- Something is wrong with the battery pack.

Пункт 1 Подготовка источника питания

После зарядки батарейного блока

Отсоедините сетевой адаптер переменного тока от гнезда DC IN на Вашей видеокамере.

Примечание

- Не допускайте контакта металлических предметов с металлическими частями штекера постоянного тока сетевого адаптера. Это может привести к короткому замыканию и повреждению Вашего сетевого адаптера.
- Содержите батарейный блок в сухом состоянии.
- Если батарейный блок предполагается не использовать длительное время, зарядите его полностью один раз, а затем используйте до тех пор, пока он снова полностью не разрядится. Храните батарейный блок в прохладном месте.

Если батарейный блок заряжен полностью Задняя подсветка ЖКД в окошке дисплея выключится.

Индикатор времени оставшегося заряда батарейного блока

Индикатор времени оставшегося заряда батарейного блока в окошке дисплея приблизительно указывает время записи с помощью видеосистемы.

Батарейный блок

Батарейный блок уже немного заряжен на предприятии-изготовителе.

До тех пор, пока Ваша видеокамера определит действительное время оставшегося заряда батарейного блока

В окошке дисплея будет отображаться индикация "--- min".

Во время зарядки батарейного блока никакой индикатор не появляется, или индикатор будет мигать в окошке дисплея в следующих случаях

- Батарейный блок установлен неправильно.
- Отсоединен сетевой адаптер переменного тока.
- Что-то не в порядке с батарейным блоком.

Step 1 Preparing the power supply

Charging time/Время зарядки

| Battery pack/ Батарейный блок | Full charge (Normal charge)/ Полная зарядка (нормальная зарядка) |
|----------------------------------|---|
| NP-F330 ¹⁾ | 150 (90) |
| NP-F530 / F550 ²⁾ | 210 (150) |
| NP-F730 / F750 | 300 (240) |
| NP-F930 / F950 | 390 (330) |
| NP-F960 | 420 (360) |

Approximate number of minutes to charge an empty battery pack

¹⁾ Supplied with DCR-TRV520E / TRV620E

²⁾ Supplied with DCR-TRV420E

Пункт 1 Подготовка источника питания

Приблизительное время в минутах для зарядки полностью разряженного батарейного блока

¹⁾ Прилагается к DCR-TRV520E/ TRV620E

²⁾ Прилагается к DCR-TRV420E

Recording time/Время записи

| Battery pack/ Батарейный блок | Recording with the viewfinder/ Запись с помощью видеокамеры | | Recording with the LCD screen/ Запись с помощью экрана ЖКД | |
|----------------------------------|--|---|---|---|
| | Continuous ³⁾ Непрерывная ³⁾ | Typical ⁴⁾ Типичная ⁴⁾ | Continuous ³⁾ Непрерывная ³⁾ | Typical ⁴⁾ Типичная ⁴⁾ |
| NP-F330 ¹⁾ | 100 (90) | 55 (50) | 75 (65) | 40 (35) |
| NP-F530 | 170 (155) | 95 (90) | 120 (105) | 70 (60) |
| NP-F550 ²⁾ | 205 (185) | 115 (105) | 145 (130) | 80 (75) |
| NP-F730 | 350 (310) | 200 (175) | 265 (240) | 150 (135) |
| NP-F750 | 425 (380) | 240 (215) | 305 (270) | 175 (155) |
| NP-F930 | 555 (500) | 315 (285) | 415 (375) | 235 (215) |
| NP-F950 | 650 (590) | 370 (335) | 475 (430) | 270 (245) |
| NP-F960 | 765 (685) | 435 (390) | 565 (505) | 320 (285) |

Approximate number of minutes when you use a fully charged battery

Numbers in parentheses "()" indicate the time using a normally charged battery.

¹⁾ Supplied with DCR-TRV520E / TRV620E

²⁾ Supplied with DCR-TRV420E

³⁾ Approximate continuous recording time at 25°C (77°F). The battery life will be shorter if you use your camcorder in a cold environment.

⁴⁾ Approximate number of minutes when recording while you repeat recording start/stop, zooming and turning the power on/off. The actual battery life may be shorter.

Приблизительное время в минутах при использовании полностью заряженного батарейного блока

Числа в скобках "()" указывают время при использовании батарейного блока с нормальной зарядкой.

¹⁾ Прилагается к DCR-TRV520E/ TRV620E

²⁾ Прилагается к DCR-TRV420E

³⁾ Приблизительное время непрерывной записи при температуре 25°C (77°F). При использовании видеокамеры в холодных условиях срок службы батарейного блока будет короче.

⁴⁾ Приблизительное время в минутах при записи с неоднократным пуском/остановкой записи, наездом видеокамеры и включением/выключением питания. Фактический срок службы заряда батарейного блока может быть короче.

Step 1 Preparing the power supply

Playing time/Время воспроизведения

| Battery pack/ Батарейный блок | Playing time on LCD screen/ Время воспроизведения на экране ЖКД | Playing time with LCD closed/ Время воспроизведения при закрытом ЖКД |
|----------------------------------|--|---|
| NP-F330 ¹⁾ | 70 (65) | 100 (90) |
| NP-F530 | 115 (105) | 165 (150) |
| NP-F550 ²⁾ | 145 (130) | 200 (180) |
| NP-F730 | 260 (235) | 335 (300) |
| NP-F750 | 295 (265) | 410 (365) |
| NP-F930 | 405 (370) | 535 (480) |
| NP-F950 | 465 (420) | 630 (570) |
| NP-F960 | 550 (495) | 740 (665) |

Approximate number of minutes when you use a fully charged battery

Numbers in parentheses "()" indicate the time using a normally charged battery. The battery life will be shorter if you use your camcorder in a cold environment.

¹⁾ Supplied with DCR-TRV520E / TRV620E

²⁾ Supplied with DCR-TRV420E

Пункт 1 Подготовка источника питания

Приблизительное время в минутах при использовании полностью заряженного батарейного блока

Цифры в скобках "()" указывают время при использовании батарейного блока с нормальной зарядкой. При использовании видеокамеры в холодных условиях срок службы батарейного блока будет короче.

¹⁾ Прилагается к DCR-TRV520E/ TRV620E

²⁾ Прилагается к DCR-TRV420E

Step 1 Preparing the power supply


The remaining battery time indicator

The indicator may not be correct, depending on the conditions in which you are recording. When you close the LCD panel and open it again, it takes about 1 minute for the correct remaining battery time to be displayed.

If the power may go off although the battery remaining indicator indicates that the battery pack has enough power to operate.

Charge the battery pack fully again so that the indication on the battery remaining indicator is correct.

What is "InfoLITHIUM"?

The "InfoLITHIUM" is a lithium ion battery pack which can exchange data such as battery consumption with compatible electronic equipment. This unit is compatible with the "InfoLITHIUM" battery pack (L series). Your camcorder operates only with the "InfoLITHIUM" battery. "InfoLITHIUM" battery packs have the  mark. "InfoLITHIUM" is a trademark of Sony Corporation.


Пункт 1 Подготовка источника питания

По индикатору времени оставшегося заряда батарейного блока во время записи

Индикатор может быть неправильным в зависимости от условий, в которых выполняется запись. Если Вы закроете панель ЖКД и откроете ее снова, то пройдет около 1 минуты, прежде чем на дисплее появится правильное время оставшегося заряда батарейного блока.

Если заряд может быть израсходован, а индикатор времени оставшегося заряда батарейного блока будет показывать, что заряд батарейного блока вполне достаточный для его эксплуатации. Зарядите батарейный блок еще раз, так чтобы показание на индикаторе оставшегося заряда батарейного блока было правильным.

Что такое "InfoLITHIUM"?

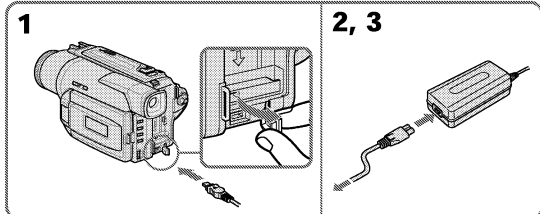
"InfoLITHIUM" представляет собой литиевый батарейный блок, который может обмениваться данными, такими как потребление заряда батарейного блока, с совместимой электронной аппаратурой. Это устройство совместимо с батарейным блоком "InfoLITHIUM" (серии L). Ваша видеокамера работает только с батарейным блоком "InfoLITHIUM". На батарейных блоках "InfoLITHIUM" имеется знак . "InfoLITHIUM" является торговой маркой корпорации Sony Corporation.

Step 1 Preparing the power supply

Connecting to the mains

When you use your camcorder for a long time, we recommend that you power it from the mains using the AC power adaptor.

- (1) Open the DC IN jack cover, and connect the AC power adaptor to the DC IN jack on your camcorder with the plug's ▲ mark facing up.
- (2) Connect the mains lead to the AC power adaptor.
- (3) Connect the mains lead to the mains.



PRECAUTION

The set is not disconnected from the AC power source (the mains) as long as it is connected to the mains, even if the set itself has been turned off.

Notes

- The AC power adaptor can supply power even if the battery pack is attached to your camcorder.
- The DC IN jack has "source priority". This means that the battery pack cannot supply any power if the mains lead is connected to the DC IN jack, even when the mains lead is not plugged into the mains.

Using a car battery

Use Sony DC Adaptor/Charger (not supplied).

Пункт 1 Подготовка источника питания

Подсоединение к сетевой розетке

Если Вы собираетесь использовать видеокамеру длительное время, рекомендуется использовать питание от электрической сети с помощью сетевого адаптера переменного тока.

- (1) Откройте крышку гнезда DC IN и подсоедините сетевой адаптер переменного тока к гнезду DC IN на Вашей видеокамере, так чтобы знак ▲ на штекере был обращен вверх.
- (2) Подсоедините провод электропитания к сетевому адаптеру переменного тока.
- (3) Подсоедините провод электропитания к сетевой розетке.

ПРЕДОСТЕРЕЖЕНИЕ

Аппарат не отключается от источника переменного тока до тех пор, пока он подсоединен к электрической сети, даже если сам аппарат и выключен.

Примечания

- Питание от сетевого адаптера переменного тока может подаваться даже в случае, если батарейный блок прикреплен к Вашей видеокамере.
- Гнездо DC IN имеет "приоритет источника". Это значит, что питание от батарейного блока не может подаваться, если провод электропитания подсоединен к гнезду DC IN, даже если провод электропитания и не подсоединен к сетевой розетке.

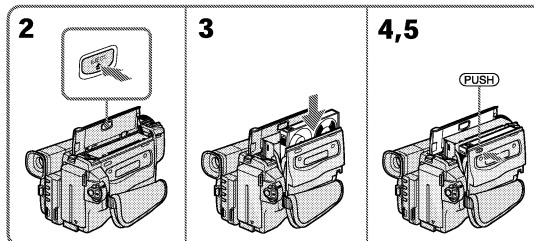
Использование автомобильного аккумулятора

Используйте адаптер/зарядное устройство постоянного тока фирмы Sony (не прилагается).

Step 2 Inserting a cassette

We recommend using Hi8 **Hi8**/Digital8 **Hi8** video cassettes.

- (1) Prepare the power supply (p. 12).
- (2) Open the lid of the cassette compartment, and press EJECT. The cassette compartment opens automatically.
- (3) Insert a cassette with its window facing out and the write-protect tab on the cassette up.
- (4) Close the cassette compartment by pressing the **REW** mark on the cassette compartment. The cassette compartment automatically goes down.
- (5) Close the lid of the cassette compartment.



To eject a cassette

Follow the procedure above, and eject the cassette in step 3.

Пункт 2 Установка кассеты

Рекомендуется использовать видеокассеты типа Hi8 **Hi8**/Digital8 **Hi8**.

- (1) Приготовьте источник питания (стр. 12).
- (2) Откройте крышку кассетного отсека и нажмите кнопку EJECT. Кассетный отсек автоматически откроется.
- (3) Вставьте кассету, так чтобы окошко было обращено наружу, а лепесток защиты записи на кассете вверх.
- (4) Закройте кассетный отсек, нажав метку **REW** на отсеке. Кассетный отсек автоматически закроется.
- (5) Закройте крышку кассетного отсека.

Для извлечения кассеты

Выполните приведенную выше процедуру и вытолкните кассету в пункте 3.

Step 2 Inserting a cassette

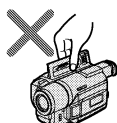
Notes

- Do not press the cassette compartment down. Doing so may cause malfunction.
- Your camcorder records pictures in the Digital8 **Hi8** system.
- The recording time when you use your camcorder is half of indicated time on Hi8 **Hi8** tape. If you select the LP mode in the menu settings, 3/4 of indicated time on Hi8 **Hi8** tape.
- If you use standard 8 **Hi8** tape, be sure to play back the tape on this camcorder. Mosaic-pattern noise may appear when you play back standard 8 **Hi8** tape on other camcorders (including other DCR-TRV420E/TRV520E/TRV620E).
- The cassette compartment may not be closed when you press any part of the lid other than the **REW** mark.
- Do not pick up your camcorder by holding the lid of the cassette compartment.

Пункт 2 Установка кассеты

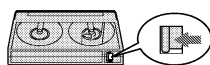
Примечания

- Не нажимайте вниз кассетный отсек. Это может привести к неисправности.
- Ваша видеокамера выполняет запись изображений в системе Digital8 **Hi8**.
- Время записи при использовании Вашей цифровой видеокамеры в два раза меньше времени, указанного на ленте Hi8 **Hi8**. Если Вы выберете режим LP в установках, то время записи будет равно 3/4 меньше времени, указанного на ленте Hi8 **Hi8**.
- Если Вы используете стандартную ленту 8 **Hi8**, то ее рекомендуется воспроизводить на этой же видеокамере. Записанные с помощью Вашей видеокамеры, на Вашей же видеокамере. В случае воспроизведения стандартных лент типа 8 **Hi8** на других видеокамерах, могут появиться помехи мозаичного типа (включая другие видеокамеры DCR-TRV420E/TRV520E/TRV620E).
- Кассетный отсек может не закрыться, если Вы нажмете на какое-либо другое место на крышке, а не на метку **REW**.
- Не поднимайте видеокамеру за крышку кассетного отсека.



To prevent accidental erasure

Slide the write-protect tab on the cassette to expose the red mark.



Для предотвращения случайного стирания Передвиньте лепесток защиты записи на кассете, так чтобы появилась красная метка.

— Recording - Basics —

Recording a picture

Your camcorder automatically focuses for you.

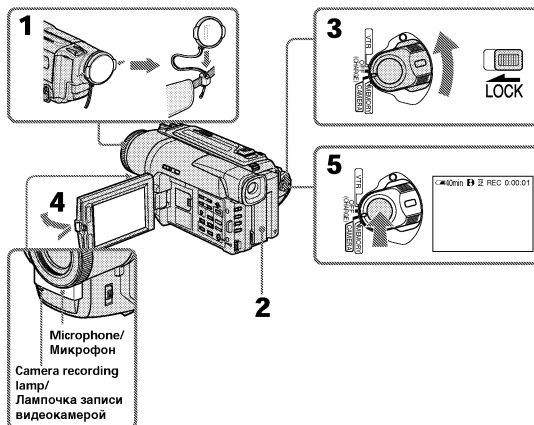
- (1) Remove the lens cap by pressing both knobs on its sides and attach the lens cap to the grip strap.
- (2) Install the power source and insert a cassette. See "Step 1" and "Step 2" for more information (p. 12 to 20).
- (3) Set the POWER switch to CAMERA while pressing the small green button. Your camcorder is set to the standby mode.
- (4) Open the LCD panel while pressing OPEN. The viewfinder automatically turns off.
- (5) Press START/STOP. Your camcorder starts recording. The REC indicator appears. The camera recording lamp located on the front of your camcorder lights up. To stop recording, press START/STOP again. The recording lamp lights up in the viewfinder when you record with the viewfinder. (DCR-TRV420E/TRV520E)

— Запись - Основные положения —

Запись изображения

Ваша видеокамера автоматически выполняет фокусировку за Вас.

- (1) Снимите крышку объектива, нажав обе кнопки на ее кромке, и прикрепите крышку объектива к ремню для захвата.
- (2) Установите источник питания и вставьте кассету. Подробные сведения приведены в "Пункте 1" и "Пункте 2" (стр. 12 – 20).
- (3) Нажав маленькую зеленую кнопку, установите переключатель POWER в положение CAMERA. Ваша видеокамера переключится в режим ожидания.
- (4) Нажав кнопку OPEN, откройте панель ЖКД. Видеоскопчик выключится автоматически.
- (5) Нажмите кнопку START/STOP. Ваша видеокамера начнет запись. Появится индикатор REC. Высветится также лампочка записи, расположенная на передней панели видеокамеры. Для остановки записи нажмите кнопку START/STOP еще раз. При записи с помощью видеоскопчика, внутри него высветится лампочка записи. (только DCR-TRV420E/TRV520E)



Recording a picture

Notes

- Fasten the grip strap firmly.
- Do not touch the built-in microphone during recording.

Note on Recording mode

Your camcorder records and plays back in the SP (standard play) mode and in the LP (long play) mode. Select SP or LP in the menu settings (p. 85). In the LP mode, you can record 1.5 times as long as in the SP mode. When you record a tape in the LP mode on your camcorder, we recommend that you play back the tape on your camcorder.

Note on LOCK

When you slide LOCK to the left, the POWER switch can no longer be set to MEMORY accidentally. The LOCK is released as a default setting.

To enable smooth transition

You can make the transition between the last scene you recorded and the next scene smooth as long as you do not eject the cassette if you turn off your camcorder. When you change the battery pack, set the POWER switch to OFF (CHARGE).

If you leave your camcorder in the standby mode for 3 minutes

Your camcorder automatically turns off. This is to save battery power and to prevent battery and tape wear. To resume the standby mode, set the POWER switch to OFF (CHARGE) once, then turn it to CAMERA again.

Запись изображения

Примечания

- Плотно пристегните ремень для захвата видеокамеры.
- Не прикасайтесь к встроенному микрофону во время записи.

Примечание по режиму записи

Ваша видеокамера выполняет запись и воспроизведение в режиме SP (стандартное воспроизведение) и в режиме LP (длгоиграющее воспроизведение). Выберите команду SP или LP в установках меню (стр. 85). В режиме LP Вы можете выполнять запись в 1,5 раза дольше по времени, чем в режиме SP. При выполнении на Вашей видеокамере записи на ленту в режиме LP рекомендуется воспроизводить эту ленту также на Вашей видеокамере.

Примечание по режиму LOCK

Если Вы передвинете переключатель LOCK влево, переключатель POWER уже не может быть случайно установлен в положение MEMORY. Режим LOCK будет устанавливаться по умолчанию.

Для обеспечения плавного перехода

Вы можете выполнять плавный переход между последним записанным эпизодом и следующим эпизодом до тех пор, пока не извлечете кассету при выключенном питании. При замене батарейного блока установите переключатель POWER в положение OFF (CHARGE).

Если Вы оставите Вашу видеокамеру в режиме ожидания на 3 минуты

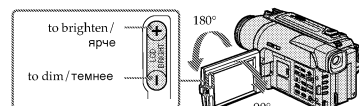
Видеокамера выключится автоматически. Это предотвращает расход заряда батарейного блока и износ ленты. Для возобновления режима ожидания установите переключатель POWER в положение OFF (CHARGE), а затем снова поверните его в положение CAMERA.

Recording a picture

Adjusting the LCD screen

To adjust the brightness of the LCD screen, press either of the two buttons on LCD BRIGHT. The LCD panel moves about 90 degrees to the viewfinder side and about 180 degrees to the lens side.

If you turn the LCD panel over so that it faces the other way, the ☉ indicator appears on the LCD screen and in the viewfinder (Mirror mode).



When closing the LCD panel, set it vertically until it clicks, and swing it into the camcorder body.

Note

When using the LCD screen except in the mirror mode, the viewfinder automatically turns off.

When you use the LCD screen outdoors in direct sunlight

The LCD screen may be difficult to see. If this happens, we recommend that you use the viewfinder.

Picture in the mirror mode

The picture on the LCD is a mirror-image. However, the picture will be normal when recorded.

During recording in the mirror mode

You cannot operate the ZERO SET MEMORY on the Remote Commander.

Indicators in the mirror mode

The STBY indicator appears as II● and REC as ●. Some of other indicators appear mirror-reversed and others are not displayed.

Запись изображения

Регулировка экрана ЖКД

Для регулировки яркости экрана ЖКД нажмите одну из кнопок на LCD BRIGHT. Панель ЖКД может передвигаться примерно на 90 градусов в сторону видоискателя и примерно на 180 градусов в сторону объектива. Если Вы повернете панель ЖКД так, что она будет направлена в другую сторону, на экране ЖКД появится индикатор ☉ (Зеркальный режим).

При закрытии панели ЖКД установите ее вертикально, пока не раздастся щелчок, а затем присоедините ее к корпусу видеокамеры.

Примечание

При использовании экрана ЖКД видоискатель автоматически выключается, кроме зеркального режима.

Если Вы используете экран ЖКД вне помещения под прямым солнечным светом

Возможно будет трудно разглядеть экран ЖКД. В этом случае рекомендуется использовать видоискатель.

Изображение в зеркальном режиме

Изображение на экране ЖКД будет отображаться зеркально. Однако запись изображения будет нормальной.

Во время записи в зеркальном режиме

Вы не можете оперировать кнопкой ZERO SET MEMORY на пульте дистанционного управления.

Индикаторы в зеркальном режиме

Индикатор STBY появится в виде II●, а индикатор REC в виде ●. Некоторые другие индикаторы появятся в зеркально отображенном виде, а некоторые из них не будут отображаться совсем.

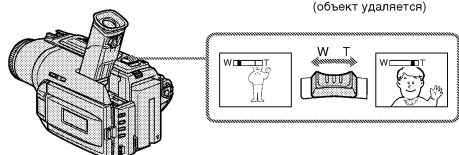
Recording a picture

After recording

- (1) Set the POWER switch to OFF (CHARGE).
- (2) Close the LCD panel.
- (3) Eject the cassette.

Using the zoom feature

Move the power zoom lever a little for a slower zoom. Move it further for a faster zoom. Using the zoom function sparingly results in better-looking recordings. "T" side: for telephoto (subject appears closer) "W" side: for wide-angle (subject appears farther away)



Zoom greater than 25x is performed digitally. To activate digital zoom, select the digital zoom power in D ZOOM in the menu settings. (p. 85) The picture quality deteriorates as the picture is processed digitally.

Запись изображения

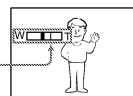
После записи

- (1) Установите переключатель POWER в положение OFF (CHARGE).
- (2) Закройте панель ЖКД.
- (3) Извлеките кассету.

Использование функции наезда видеокамеры

Передвиньте рычаг приводного вариообъектива слегка для относительно медленного наезда видеокамеры. Передвиньте его сильнее для ускоренного наезда видеокамеры. Использование функции наезда видеокамеры в небольшом количестве обеспечивает наилучшие результаты. Сторона "T": для телефото (объект приближается) Сторона "W": для широкоугольного вида (объект удаляется)

Наезд видеокамеры более 25x выполняется цифровым методом. Для приведения в действие цифрового вариообъектива выберите приводной цифровой вариообъектив D ZOOM в установках меню (стр. 85). Поскольку обработка изображения выполняется цифровым способом, качество изображения несколько ухудшится.



The right side of the bar shows the digital zooming zone. The digital zooming zone appears when you select the digital zoom power in D ZOOM in the menu settings. / Правая сторона полосы на экране показывает зону цифровой трансфокации. Если Вы выберете приводной цифровой вариообъектив D ZOOM в установках меню, появится зона цифровой трансфокации.

Recording a picture

Notes on digital zoom

- Digital zoom starts to function when zoom exceeds 25x.
- The picture quality deteriorates as you go toward the "T" side.

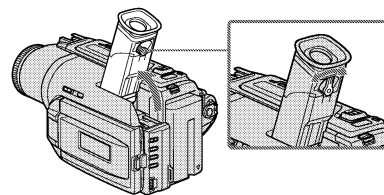
When you shoot close to a subject

If you cannot get a sharp focus, move the power zoom lever to the "W" side until the focus is sharp. You can shoot a subject that is at least about 80 cm (about 2 feet 5/8 inch) away from the lens surface in the telephoto position, or about 1 cm (about 1/2 inch) away in the wide-angle position.

To record pictures with the viewfinder - adjusting the viewfinder

If you record pictures with the LCD panel closed, check the picture with the viewfinder. Adjust the viewfinder lens to your eyesight so that the indicators in the viewfinder come into sharp focus.

Lift up the viewfinder and move the viewfinder lens adjustment lever.



Запись изображения

Примечания к наезду видеокамеры цифровым методом

- Цифровой вариообъектив начинает срабатывать в случае, если наезд видеокамеры превышает 25x.
- Качество изображения ухудшается по мере приближения к стороне "T".

При съемке объекта с близкого положения

Если Вы не можете получить четкой фокусировки, передвиньте рычаг приводного вариообъектива сторону "W" до получения четкой фокусировки. Вы можете выполнять съемку объекта в положении телефото, который отстоит по крайней мере на расстоянии 80 см от поверхности объектива или же около 1 см в положении широкоугольного вида.

Для записи изображений с помощью видоискателя - регулировка видоискателя

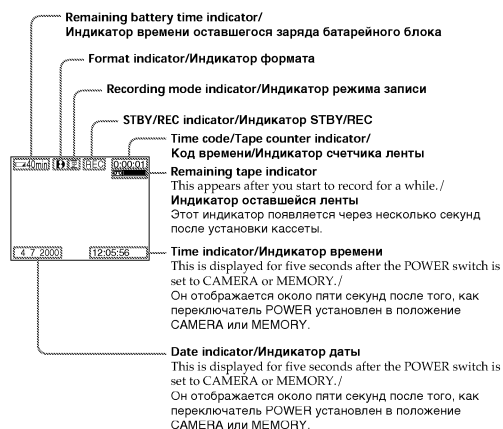
Если Вы будете записывать изображения при закрытой панели ЖКД, проверьте изображение с помощью видоискателя. Отрегулируйте объектив видоискателя в соответствии со своим зрением, так чтобы индикаторы в видоискателе были четко сфокусированы.

Поднимите видоискатель и подвигайте рычаг регулировки объектива видоискателя.

Recording a picture

Indicators displayed in the recording mode

The indicators are not recorded on tape.



Time code (for tapes recorded in the Digital8 system only)

The time code indicates the recording or playback time, "0:00:00" (hours:minutes:seconds) in CAMERA mode and "0:00:00:00" (hours:minutes:seconds:frames) in VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E) mode. You cannot rewrite only the time code.

When you play back tapes recorded in the Hi8/ standard 8 system, the tape counter appears. You cannot reset the time code or the tape counter.

Запись изображения

Индикаторы, отображаемые в режиме записи

Индикаторы не записываются на ленту.

Код времени (только для лент, записанных в цифровой системе Digital8)

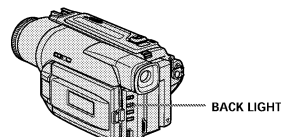
Код времени указывает время записи или воспроизведения, "0:00:00" (часы: минуты: секунды) в режиме CAMERA и "0:00:00:00" (часы: минуты: секунды: кадры) в режиме VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/ TRV520E). Вы не можете перезаписать только код времени. При воспроизведении лент, записанных в системе Hi8/стандартной системе 8, появляется счетчик ленты. Вы не можете переустановить код времени или счетчик ленты.

Recording a picture

Shooting backlit subjects – BACK LIGHT

When you shoot a subject with the light source behind the subject or a subject with a light background, use the backlight function.

Press BACK LIGHT in CAMERA or MEMORY mode. The indicator appears on the LCD screen or in the viewfinder. To cancel, press BACK LIGHT again.



If you press EXPOSURE when shooting backlit subjects the backlight function is canceled.

Запись изображения

Съемка объектов с задней подсветкой – BACKLIGHT

Если Вы выполняете съемку объекта с источником света позади него или же объекта со светлым фоном, используйте функцию задней подсветки.

Нажмите кнопку BACK LIGHT в режиме CAMERA или MEMORY. В видоискателе или на экране ЖКД появится индикатор . Для отмены нажмите кнопку BACK LIGHT еще раз.

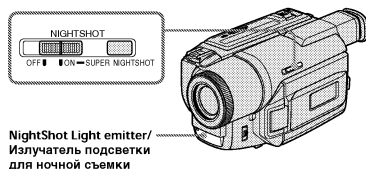
Если вы нажмете кнопку EXPOSURE при выполнении съемки объектов с задней подсветкой функция задней подсветки будет отменена.

Recording a picture

Shooting in the dark – NightShot/Super NightShot

The NightShot function enables you to shoot a subject in a dark place. For example, you can satisfactorily record the environment of nocturnal animals for observation when you use this function.

While your camcorder is in CAMERA or MEMORY mode, slide NIGHTSHOT to ON. and "NIGHTSHOT" indicators flash on the LCD screen or in the viewfinder. To cancel the NightShot function, slide NIGHTSHOT to OFF.



Using SUPER NIGHTSHOT

The Super NightShot mode makes subjects up to 16 times brighter than those recorded in the NightShot mode.

- Slide NIGHTSHOT to ON in CAMERA mode. and "NIGHTSHOT" indicators flash on the LCD screen or in the viewfinder.
- Press SUPER NIGHTSHOT. and "SUPER NIGHTSHOT" indicators flash on the LCD screen or in the viewfinder. To cancel the Super NightShot mode, press SUPER NIGHTSHOT again.

Using the NightShot Light

The picture will be clearer with the NightShot Light on. To enable NightShot Light, set N.S.LIGHT to ON in the menu settings (p. 85).

Запись изображения

Съемка в темноте – Ночная съемка/Ночная суперсъемка

Функция ночной съемки позволяет Вам выполнять съемку объектов в темных местах. Например, Вы сможете с успехом выполнять съемку ночных животных для наблюдения при использовании данной функции.

В то время, когда видеокамера находится в режиме CAMERA или MEMORY, передвиньте переключатель NIGHTSHOT в положение ON. Индикаторы и "NIGHTSHOT" начнут мигать на экране ЖКД или в видоискателе. Для отмены функции ночной съемки передвиньте переключатель NIGHTSHOT в положение OFF.

Использование режима SUPER NIGHTSHOT

Режим ночной суперсъемки позволяет сделать объекты более чем в 16 раз ярче, чем в случае, если Вы будете выполнять съемку в темноте в режиме ночной съемки.

- Передвиньте переключатель NIGHTSHOT в положение ON в режиме CAMERA. На экране ЖКД или в видоискателе появятся индикаторы и "NIGHTSHOT".
- Нажмите кнопку SUPER NIGHTSHOT. На экране ЖКД или в видоискателе начнут мигать индикаторы и "SUPER NIGHTSHOT". Для отмены режима ночной суперсъемки нажмите кнопку SUPER NIGHTSHOT еще раз.

Использование подсветки для ночной съемки
Изображение станет ярче, если включить функцию ночной подсветки. Для включения функции ночной подсветки установите переключатель N.S.LIGHT в положение ON в установках меню (стр. 85).

Recording a picture

Notes

- Do not use the NightShot function in bright places (ex. outdoors in the daytime). This may cause your camcorder to malfunction.
- When you keep NIGHTSHOT set to ON in normal recording, the picture may be recorded in incorrect or unnatural colours.
- If focusing is difficult with the autofocus mode when using the NightShot function, focus manually.

While using the NightShot function, you can not use the following functions:

- Exposure
- PROGRAM AE

While using the Super NightShot function, you can not use the following functions:

- Fader
- Digital effect
- Exposure
- PROGRAM AE

Shutter speed in the Super NightShot mode

The shutter speed will be automatically changed depending on the brightness of the background. The motion of the picture will be slow.

NightShot Light

NightShot Light rays are infrared and so are invisible. The maximum shooting distance using the NightShot Light is about 3 m (10 feet).

Запись изображения

Примечания

- Не используйте функцию ночной съемки в ярких местах (например, на улице в дневное время). Это может привести к неисправности Вашей видеокамеры.
- При удержании установки NIGHTSHOT в положении ON при нормальной записи изображение может быть записано в неправильных или неестественных цветах.
- Если фокусировка затруднена в автоматическом режиме при использовании функции ночной съемки, выполните фокусировку вручную.

При использовании функции ночной съемки Вы не можете использовать следующие функции:

- Экспозиция
- PROGRAM AE

При использовании функции ночной суперсъемки Вы не можете использовать следующие функции:

- Фейдер
- Цифровой эффект
- Экспозиция
- PROGRAM AE

Скорость затвора в режиме ночной суперсъемки

Скорость затвора будет автоматически изменяться в зависимости от яркости фона. Воспроизведение изображения будет замедленным.

Подсветка для ночной съемки



Лучи подсветки для ночной съемки являются инфракрасными и поэтому невидимыми. Максимальное расстояние для съемки при использовании подсветки для ночной съемки равно примерно 3 м.

Recording a picture

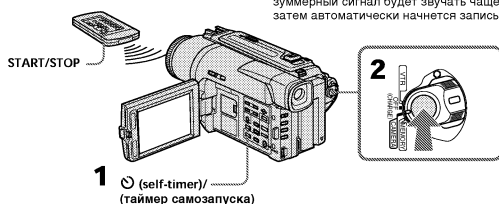
Self-timer recording

Recording with the self-timer starts in 10 seconds automatically.

This mode is useful when you want to record yourself. You can also use the Remote Commander for this operation.

- (1) Press  (self-timer) in the standby mode. The  (self-timer) indicator appears on the LCD screen or in the viewfinder.
- (2) Press START/STOP.

Self-timer starts counting down from 10 with a beep sound. In the last two seconds of the countdown, the beep sound gets faster, then recording starts automatically.





To stop the self-timer recording

Press START/STOP.
Use the Remote Commander for convenience.

To record still images using the self-timer

Press PHOTO in step 2. (P. 43)

To cancel self-timer recording

Press  (self-timer) so that the  indicator disappears from the LCD or viewfinder screen while your camcorder is in the standby mode.

Note

The self-timer recording mode is automatically cancelled when:



- Self-timer recording is finished.
- The POWER switch is set to OFF (CHARGE), VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E).

30

Запись изображения

Запись по таймеру самозапуска

Запись с помощью таймера самозапуска начнется через 10 секунд автоматически. Этот режим является полезным в том случае, если Вы хотите выполнить запись самого себя. Для этой операции Вы можете также использовать пульт дистанционного управления.

- (1) Нажмите кнопку  (таймер самозапуска) в режиме ожидания. На экране ЖКД или в видоискателе появится индикатор  (таймер самозапуска).
- (2) Нажмите кнопку START/STOP. Таймер самозапуска начнет обратный отсчет от 10 с зуммерным сигналом. В последние две секунды обратного отсчета зуммерный сигнал будет звучать чаще, а затем автоматически начнется запись.



Для остановки таймера самозапуска

Нажмите кнопку START/STOP.
Используйте для удобства пульт дистанционного управления.

Для записи неподвижных изображений с помощью таймера самозапуска

Нажмите кнопку PHOTO в пункте 2. (стр. 43)

Для отмены записи по таймеру самозапуска

Нажмите кнопку  (таймер самозапуска), так чтобы индикатор  исчез с экрана ЖКД или видоискателя в то время, когда Ваша видеокамера находится в режиме ожидания.

Примечание


Режим записи по таймеру самозапуска будет автоматически отменен в случаях:

- Окончания записи по таймеру самозапуска.
- Установки переключателя POWER в положение OFF (CHARGE), VTR (модель DCR-TRV620E) или PLAYER (модель DCR-TRV420E/ TRV520E).


Проверка записи – END SEARCH / EDITSEARCH / Просмотр записи

Просмотр записи

Вы можете проверить последнюю записанную часть.

Нажмите одновременно сторону  кнопки EDITSEARCH в режиме ожидания. Будут воспроизведены последние несколько секунд записанной части. Вы можете контролировать звук через акустическую систему или головные телефоны.

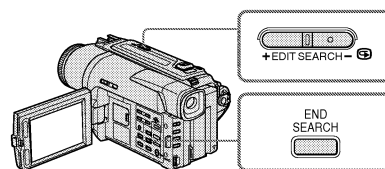
Примечания

- Функции END SEARCH, EDITSEARCH и просмотра записи работают только для лент, записанных в цифровой системе Digital .
- Если Вы случайно начали запись после использования функции поиска конца записи, то переход между последним записанным эпизодом и следующим записываемым эпизодом может не быть плавным.
- Если Вы вытолкнули кассету после того, как будет выполнена запись на ленте, функция поиска конца записи не будет работать.

Если на ленте между записанными частями имеется незаписанный участок. Функция поиска может не работать.

Checking the recording – END SEARCH / EDITSEARCH / Rec Review

You can use these buttons to check the recorded picture or shoot so that the transition between the last recorded scene and the next scene you record is smooth.




END SEARCH

You can go to the end of the recorded section after you record.

Press END SEARCH in the standby mode. The last 5 seconds of the recorded section are played back and returns to the standby mode. You can monitor the sound from the speaker or headphones.

EDITSEARCH

You can search for the next recording start point.

Hold down the + / - () side of EDITSEARCH in the standby mode. The recorded section is played back.

- + : to go forward
 - : to go backward
- Release EDITSEARCH to stop playback. If you press START/STOP, re-recording begins from the point you released EDITSEARCH. You cannot monitor the sound.

Проверка записи – END SEARCH / EDITSEARCH / Просмотр записи

Вы можете использовать эти кнопки для проверки записанного изображения или съемки, так чтобы переход между последним записанным эпизодом и следующим записываемым эпизодом был плавным.


END SEARCH

Вы можете дойти до конца записанной части ленты после выполнения записи.

Нажмите кнопку END SEARCH в режиме ожидания. Будут воспроизведены последние 5 секунд, после чего видеокамера вернется в режим ожидания. Вы можете контролировать звук через динамик или головные телефоны.

EDITSEARCH

Вы можете выполнять поиск места начала следующей записи.


Держите нажатой сторону + / - () кнопки EDITSEARCH в режиме ожидания. Будет воспроизведена записанная часть.

- + : для продвижения вперед
 - : для продвижения назад
- Отпустите кнопку EDITSEARCH для остановки воспроизведения. Если Вы нажмете кнопку START/STOP, начнется перезапись с того места, где Вы отпустили кнопку EDITSEARCH. Вы не можете контролировать звук.


Checking the recording – END SEARCH / EDITSEARCH / Rec Review

Rec Review

You can check the section which you have stopped most recently.

Press the - () side of EDITSEARCH momentarily in the standby mode. The section you have stopped most recently will be played back for a few seconds, and then your camcorder will return to the standby mode. You can monitor the sound from the speaker or headphones.

Notes



- END SEARCH, EDITSEARCH and Rec Review work only for tapes recorded in the Digital  system.
- If you start recording after using the end search function, occasionally, the transition between the last scene you recorded and the next scene may not be smooth.
- Once you eject the cassette after you have recorded on the tape, the end search function does not work.

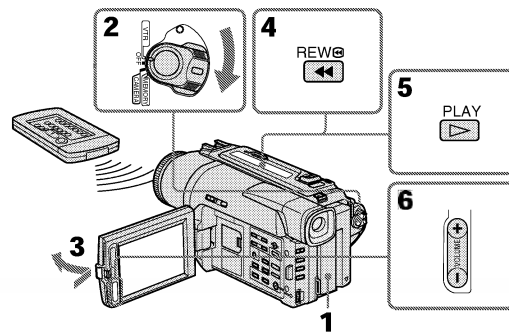
If a tape has a blank portion in the recorded portions

The end search function may not work correctly.


– Playback – Basics – Playing back a tape

You can monitor the playback picture on the LCD screen. If you close the LCD panel, you can monitor the playback picture in the viewfinder. You can control playback using the Remote Commander supplied with your camcorder.

- (1) Install the power source and insert the recorded tape.
- (2) Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E) while pressing the small green button. The video control buttons light up.
- (3) Open the LCD panel while pressing OPEN.
- (4) Press  to rewind the tape.
- (5) Press  to start playback.
- (6) To adjust the volume, press either of the two buttons on VOLUME. The speaker on your camcorder is silent when the LCD panel is closed.



To stop playback
Press .

Для остановки воспроизведения
Нажмите кнопку .

32

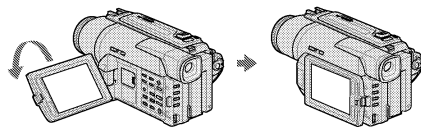
31

33

Playing back a tape

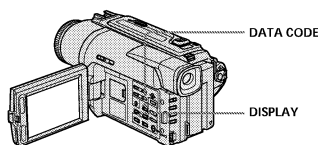
When monitoring on the LCD screen

You can turn the LCD panel over and move it back to the camcorder body with the LCD screen facing out.



To display the screen indicators - Display function

Press DISPLAY on your camcorder or the Remote Commander supplied with your camcorder. The indicators appear on the LCD screen. To make the indicators disappear, press DISPLAY again.



Воспроизведение ленты

Во время контроля на экране ЖКД

Вы можете повернуть панель управления и придвинуть ее обратно на место к корпусу видеокамеры, так что экран ЖКД будет обращен наружу.

Для отображения экранных индикаторов - Функция индикации

Нажмите кнопку DISPLAY на Вашей видеокамере или на пульте дистанционного управления, который прилагается к Вашей видеокамере. На экране ЖКД появятся индикаторы. Для того, чтобы индикаторы исчезли, нажмите еще раз кнопку DISPLAY.

Playing back a tape

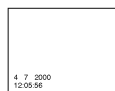
Using the data code function

Your camcorder automatically records not only images on the tape but also the recording data (date/time or various settings when recorded) (Data code).

Press DATA CODE on your camcorder or the Remote Commander in the playback mode.

The display changes as follows:

date/time → various settings (SteadyShot, exposure AUTO/MANUAL, white balance, gain, shutter speed, aperture value) → no indicator



Not to display recording date

Set DATA CODE to DATE in the menu settings (p. 85).

The display changes as follows: date/time → no indicator

Notes on the data code function

- The data code function works only for tapes recorded in the Digital8 system.
- Various settings of the recording data are not recorded when recording images on "Memory Stick."

Recording data

Recording data is your camcorder's information when you have recorded. In the recording mode, the recording data will not be displayed.

When you use data code function, bars

(--- and ---) appear if:

- A blank section of the tape is being played back.
- The tape is unreadable due to tape damage or noise.
- The tape was recorded by a camcorder without the date and time set.

Data Code

When you connect your camcorder to the TV, the data code appears on the TV screen.

Воспроизведение ленты

Использование функции кода даты

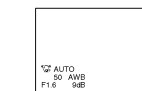
Ваша видеокамера автоматически записывает не только изображения на ленту, но также и данные записи (дату/время или разные установки при записи).

(Код даты).

Нажмите кнопку DATE CODE на Вашей видеокамере или пульт дистанционного управления в режиме воспроизведения.

Индикация будет изменяться следующим образом:

дата/время → разные установки (устойчивая съемка, экспозиция AUTO/MANUAL, баланс белого, усиление, скорость затвора, величина диафрагмы) → без индикации



Для того, чтобы не отображались данные записи

Установите команду DATE CODE в положение DATE в установках меню (стр. 85).

Индикация будет изменяться следующим образом: дата/время → без индикации

Примечания по функции кода данных

- Функция кода данных работает только для лент, записанных в цифровой системе Digital8.
- Разные установки данных записи не записываются при записи изображений на "Memory Stick".

Записанные данные

Записанные данные несут информацию о записи, выполненной Вашей видеокамерой. В режиме записи данные отображаются не будут.

Если Вы используете функцию кода данных, то появятся полосы (--- и ---) или (---), если:

- Воспроизводится незаписанный участок на ленте.
- Лента является не читаемой из-за повреждения или помех.
- Запись на ленту была выполнена видеокамерой без установки даты и времени.

Код данных

Если Вы подсоедините Вашу видеокамеру к телевизору, на экране появится код данных.

Playing back a tape

Various playback modes

To operate video control buttons, set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).

To view a still picture (playback pause)

Press II during playback. To resume playback, press II or ►.

To advance the tape

Press ► in the stop mode. To resume normal playback, press ►.

To rewind the tape

Press ◀ in the stop mode. To resume normal playback, press ►.

To change the playback direction

Press < on the Remote Commander during playback to reverse the playback direction. To resume normal playback, press ►.

To locate a scene monitoring the picture (picture search)

Keep pressing ◀ or ► during playback. To resume normal playback, release the button.

To monitor the high-speed picture while advancing or rewinding the tape (skip scan)

Keep pressing ◀ while rewinding or ► while advancing the tape. To resume rewinding or advancing, release the button.

To view the picture at slow speed (slow playback)

Press I on the Remote Commander during playback. For slow playback in the reverse direction, press <, then press I on the Remote Commander. To resume normal playback, press ►.

Воспроизведение ленты

Переменные режимы воспроизведения

Для выполнения управления кнопками установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).

Для просмотра изображения (пауза воспроизведения)

Нажмите во время воспроизведения кнопку II. Для возобновления обычного воспроизведения нажмите кнопку II или кнопку ►.

Для ускоренной перемотки ленты вперед

Нажмите в режиме остановки кнопку ►. Для возобновления обычного воспроизведения нажмите кнопку ►.

Для ускоренной перемотки ленты назад

Нажмите в режиме остановки кнопку ◀. Для возобновления обычного воспроизведения нажмите кнопку ►.

Для изменения направления воспроизведения

Нажмите кнопку < на пульте дистанционного управления во время воспроизведения для изменения направления воспроизведения.

Для возобновления обычного воспроизведения, отпустите кнопку ►.

Для отыскания эпизода во время контроля изображения (поиск изображения)

Держите нажатой кнопку ◀ или ► во время воспроизведения. Для восстановления обычного воспроизведения отпустите кнопку ►.

Для просмотра изображения на высокой скорости во время ускоренной перемотки ленты вперед или назад (поиск методом прогона)

Держите нажатой кнопку ◀ или ► во время ускоренной перемотки ленты вперед или назад, а затем нажмите кнопку ► на пульте дистанционного управления. Для возобновления обычного воспроизведения нажмите кнопку ►.

Для просмотра воспроизведения изображения на замедленной скорости (замедленное воспроизведение)

Нажмите во время воспроизведения кнопку I на пульте дистанционного управления. Для замедленного воспроизведения в обратном направлении нажмите кнопку <, а затем нажмите кнопку ► на пульте дистанционного управления. Для возобновления обычного воспроизведения нажмите кнопку ►.

Playing back a tape

To view the picture at double speed

Press x2 on the Remote Commander during playback. For double speed playback in the reverse direction, press <, then press x2 on the Remote Commander. To resume normal playback, press ►.

To view the picture frame-by-frame

Press III on the Remote Commander in the playback pause mode. For frame-by-frame playback in the reverse direction, press ◀. To resume normal playback, press ►.

To search the last scene recorded (END SEARCH)

Press END SEARCH in the stop mode. The last 5 seconds of the recorded section plays back and stops.

In the various playback modes

- Noise may appear when your camcorder plays back tapes recorded in the Hi8/standard 8 system.
- Sound is muted.
- The previous recording may appear as a mosaic image when playing back in the Digital8 system.

Notes on the playback pause mode

- When the playback pause mode lasts for 3 minutes, your camcorder automatically enters the stop mode.
- To resume playback, press ►.
- The previous recording may appear.

Slow playback for tapes recorded in the Digital8 system

The slow playback can be performed smoothly on your camcorder; however, this function does not work for an output signal from the DV IN/OUT or DV OUT jack.

When you play back a tape in reverse

Horizontal noise may appear at the center or top and bottom of the screen. This is not a malfunction.

Воспроизведение ленты

Для просмотра воспроизведения изображения на удвоенной скорости

Нажмите кнопку x2 на пульте дистанционного управления во время воспроизведения. Для воспроизведения на удвоенной скорости в обратном направлении нажмите кнопку <, а затем кнопку x2 на пульте дистанционного управления. Для возобновления обычного воспроизведения нажмите кнопку ►.

Для покадрового просмотра воспроизведения изображения

Нажмите кнопку III на пульте дистанционного управления в режиме паузы воспроизведения. Для покадрового воспроизведения в обратном направлении нажмите кнопку ◀. Для возобновления обычного воспроизведения нажмите кнопку ►.

Для поиска последнего записанного эпизода (END SEARCH)

Нажмите кнопку END SEARCH в режиме остановки. Будут воспроизведены последние 5 секунд записанного участка на ленте, после чего воспроизведение остановится.

В переменных режимах воспроизведения

- При воспроизведении на видеокамере лент Hi8/8 могут появиться помехи.
- Звук будет приглушен.
- При воспроизведении в цифровой системе Digital8 изображение предыдущих записей может стать мозаичным.

Примечания по режиму паузы воспроизведения

- Если режим паузы воспроизведения продлится около 3 минут, Ваша видеокамера автоматически войдет в режим остановки.
- Для возобновления воспроизведения нажмите кнопку ►.
- Может появиться предыдущая запись.

Замедленное воспроизведение для лент, записанных в цифровой системе Digital8

Замедленное воспроизведение может выполняться на Вашей видеокамере без помех; однако эта функция не работает через выходной сигнал из гнезда DV IN/OUT или гнезда DV OUT.

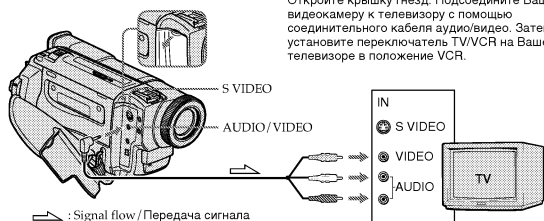
При воспроизведении ленты в обратном направлении

На экране могут появиться горизонтальные помехи по центру или же сверху и снизу экрана. Это не является неисправностью.

Viewing the recording on TV

Connect your camcorder to your TV or VCR with the A/V connecting cable supplied with your camcorder to watch the playback picture on the TV screen. You can operate the playback control buttons in the same way as when you monitor playback pictures on the LCD screen. When monitoring the playback picture on the TV screen, we recommend that you power your camcorder from the mains using the AC power adaptor (p. 13). Refer to the operating instructions of your TV or VCR.

Open the jack cover. Connect your camcorder to the TV using the A/V connecting cable. Then, set the TV/VCR selector on the TV to VCR.



If your TV is already connected to a VCR

Connect your camcorder to the LINE IN input on the VCR by using the A/V connecting cable supplied with your camcorder. Set the input selector on the VCR to LINE.

If your TV or VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video input jack and the white or the red plug to the audio input jack on the VCR or the TV. If you connect the white plug, the sound is L (left) signal. If you connect the red plug, the sound is R (right) signal.

38

Просмотр записи на экране телевизора

Подсоедините Вашу видеокамеру к Вашему телевизору или КВМ с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере для просмотра воспроизводимого изображения на экране телевизора. Вы можете оперировать кнопками управления воспроизведением таким же способом, как при управлении воспроизводимым изображением на экране ЖКД. При управлении воспроизводимым изображением на экране телевизора рекомендуется подключить питание к Вашей видеокамере от сетевой розетки с помощью сетевого адаптера переменного тока (стр. 13). См. инструкцию по эксплуатации Вашего телевизора или КВМ.

Откройте крышку гнезд. Подсоедините Вашу видеокамеру к телевизору с помощью соединительного кабеля аудио/видео. Затем, установите переключатель TV/VCR на Вашем телевизоре в положение VCR.

Если Ваш телевизор уже подсоединен к КВМ

Подсоедините Вашу видеокамеру к входному гнезду LINE IN на КВМ с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере. Установите селектор входного сигнала на КВМ в положение LINE.

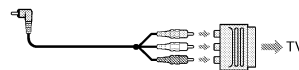
Если Ваш телевизор или КВМ монофонического типа

Подсоедините желтый штекер соединительного кабеля аудио/видео к входному гнезду видеосигнала и белый или красный штекер к входному гнезду аудиосигнала на КВМ или телевизоре. Если Вы подсоедините белый штекер, то будет звук L (левый) канал. Если Вы подсоедините красный штекер, то будет звук R (правый) канал.

Viewing the recording on TV

If your TV/VCR has a 21-pin connector (EUROCONNECTOR)

Use the 21-pin adaptor supplied with your camcorder.



If your TV or VCR has an S video jack

Connect using an S video cable (not supplied) to obtain high-quality pictures. With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable. Connect an S video cable (not supplied) to the S video jacks on both your camcorder and the TV or the VCR.

Using the AV cordless IR receiver

Once you connect the AV cordless IR receiver (not supplied) to your TV or VCR, you can easily view the picture on your TV. For details, refer to the operating instructions of the AV cordless IR receiver.

Просмотр записи на экране телевизора

Если в Вашем телевизоре/КВМ имеется 21-штырьковый разъем (EUROCONNECTOR)

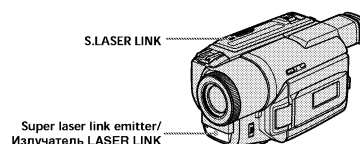
Используйте 21-штырьковый адаптер, прилагаемый к Вашей видеокамере.

Если в Вашем телевизоре имеется гнездо S видео

При данном соединении Вам не нужно подсоединять желтый штекер (видео) соединительного кабеля аудио/видео. Подсоедините кабель S видео (не прилагается) к гнездам S видео на Вашей видеокамере и Вашем телевизоре или КВМ.

Использование беспроводного ИК аудиовидеоприемника

После подсоединения беспроводного ИК аудиовидеоприемника к Вашему телевизору (не прилагается) Вы можете легко наблюдать изображение на экране Вашего телевизора. Подробные сведения содержатся в инструкции по эксплуатации беспроводного ИК аудиовидеоприемника.



Playback - Basics

Воспроизведение - Основные положения

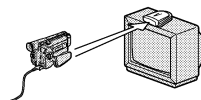
39

Viewing the recording on TV

Before operation

Attach the power supply such as the AC power adaptor to your camcorder, and insert the recorded tape.

- (1) After connecting your TV and AV cordless IR receiver, set the POWER switch on the AV cordless IR receiver to ON.
- (2) Turn the TV on and set the TV/VCR selector on the TV to VCR.
- (3) Set the POWER switch on your camcorder to VTR.
- (4) Press S.LASER LINK. The lamp of S.LASER LINK lights up.
- (5) Press ► on your camcorder to start playback.
- (6) Point the super laser link emitter at the AV cordless IR receiver. Adjust the position of your camcorder and the AV cordless IR receiver to obtain clear playback pictures.



To cancel the super laser link function

Press S.LASER LINK. The lamp on the S.LASER LINK button goes out.

If you turn the power off

Super laser link function turns off automatically.

When super laser link is activated (the S.LASER LINK button is lit)

Your camcorder consumes power. Press S.LASER LINK to turn off the super laser link function when it is not needed.

▲ is a trademark of Sony Corporation.

Просмотр записи на экране телевизора

Перед эксплуатацией

Прикрепите источник питания, например, сетевой адаптер переменного тока, к Вашей видеокамере, и вставьте записанную ленту.

- (1) После подсоединения к Вашему телевизору беспроводного ИК аудиовидеоприемника установите переключатель POWER на беспроводном ИК аудиовидеоприемнике в положение ON.
- (2) Включите телевизор и установите селектор TVC/VCR на телевизоре в положение VCR.
- (3) Установите переключатель POWER на Вашей видеокамере в положение VTR.
- (4) Нажмите кнопку S.LASER LINK. Высветится лампочка S.LASER LINK.
- (5) Нажмите кнопку ► на Вашей видеокамере для начала включения воспроизведения.
- (6) Направьте излучатель лазерного суперканала на беспроводный ИК аудиовидеоприемник. Отрегулируйте положение Вашей видеокамеры и беспроводного ИК аудиовидеоприемника для получения четкого воспроизводимого изображения.

Для отмены функции лазерного суперканала передачи сигналов

Нажмите кнопку S.LASER LINK. Лампочка на кнопке S.LASER LINK погаснет.

Если Вы выключите питание

Лазерный суперканал передачи сигналов выключится автоматически.

При включенном лазерном суперканале передачи сигналов (при этом высвечивается кнопка S.LASER LINK)

Ваша видеокамера потребляет питание. Нажмите кнопку S.LASER LINK для выключения функции лазерного суперканала передачи сигналов, если она не требуется.

▲ является фирменным знаком Sony Corporation.

— Advanced Recording Operations —

Recording a still image on a tape - Tape Photo recording

You can record a still image like a photograph. This mode is useful when you want to record a picture such as a photograph or when you print a picture using a video printer (not supplied). You can record about 510 images in the SP mode and about 765 images in the LP mode on a tape which can record for 60 minutes in the SP mode. Besides the operation described here, your camcorder can record still images on the "Memory Stick" (p. 100).

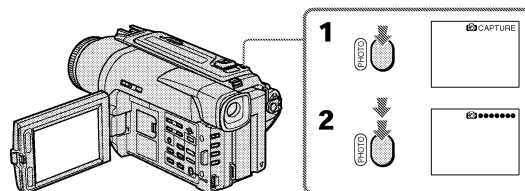
- (1) In the standby mode, keep pressing PHOTO lightly until a still image appears. The CAPTURE indicator appears. Recording does not start yet. To change the still image, release PHOTO, select a still image again, and then press and hold PHOTO lightly.
- (2) Press PHOTO deeper. The still image on the LCD screen or in the viewfinder is recorded for about seven seconds. The sound during those seven seconds is also recorded. The still image is displayed on the LCD screen or in the viewfinder until recording is completed.

— Усовершенствованные операции съемки —

Запись неподвижного изображения на ленту - Фотосъемка на ленту

Вы можете записывать неподвижное изображение подобно фотографии. Данный режим полезен, если Вы хотите записывать изображение в виде фотоснимка или же при выполнении отпечатков с помощью видеопринтера (не прилагается). Вы можете записать около 510 изображений в режиме SP и около 765 изображений в режиме LP ленты, которая позволяет выполнять запись в течение 60 минут в режиме SP. Кроме описанной здесь операции, Ваша видеокамера может выполнить запись неподвижных изображений на "Memory Stick" (стр. 100).

- (1) В режиме ожидания держите слегка нажатой кнопку PHOTO до тех пор, пока не появится неподвижное изображение. Появится индикатор CAPTURE. Запись пока еще не началась. Для изменения неподвижного изображения отпустите кнопку PHOTO, выберите неподвижное изображение снова, а затем нажмите и держите слегка нажатой кнопку PHOTO.
- (2) Нажмите кнопку PHOTO сильнее. Неподвижное изображение в видоискателе или на экране ЖКД будет записываться около семи секунд. В течение этих семи секунд будет записываться и звук. Неподвижное изображение будет отображаться на экране ЖКД или в видоискателе тех пор, пока запись не будет завершена.



Advanced Recording Operations

Усовершенствованные операции съемки

41

Recording a still image on a tape - Tape Photo recording

Notes

- During the tape photo recording, you cannot change the mode or setting.
- The PHOTO button does not work:
 - while the digital effect function is set or in use.
 - while the fader function is in use.
- When recording a still image, do not shake your camcorder. Mosaic-pattern noise may appear on the image.

To use the tape photo recording function using the Remote Commander
Press PHOTO in the Remote Commander. Your camcorder records an image on the LCD screen or in the viewfinder immediately.

When you use the tape photo recording function during normal CAMERA recording
You cannot check an image on the LCD screen or in the viewfinder by pressing PHOTO lightly. Press PHOTO deeper. The still image is then recorded for about seven seconds, and your camcorder returns to the standby mode. During the seven seconds to record, you cannot shoot another still image.

Запись неподвижного изображения на ленту - Фотосъемка на ленту

Примечания

- Во время фотосъемки на ленту Вы не можете изменять режим или установку.
- Кнопка PHOTO не работает:
 - если установлена или используется функция цифрового эффекта.
 - если используется функция фейдера.
- При записи неподвижного изображения не трясите Вашу видеокамеру. Иначе на изображении могут появиться помехи мозаичного типа.

Для использования функции фотосъемки на ленту с помощью пульта дистанционного управления
Нажмите кнопку PHOTO на пульте дистанционного управления. Ваша видеокамера тотчас же начнет запись изображения на экране ЖКД или в видоискателе.

При использовании функции фотосъемки на ленту во время обычной записи CAMERA

Вы не можете проверить изображение на экране ЖКД или в видоискателе, слегка нажав кнопку PHOTO. Нажмите кнопку PHOTO сильнее. Неподвижное изображение будет записываться около семи секунд, а затем видеокамера вернется в режим ожидания. В течение этих семи секунд записи Вы не можете выполнять съемку другого неподвижного изображения.

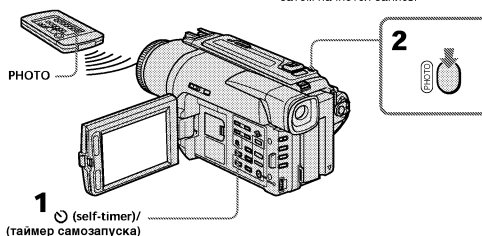
Recording a still image on a tape - Tape Photo recording

Self-timer tape photo recording

You can record still images on tapes with the self-timer. This mode is useful when you want to record yourself. You can also use the Remote Commander for this operation.

- (1) In the standby mode, press (self-timer). The (self-timer) indicator appears on the LCD screen or in the viewfinder.
- (2) Press PHOTO firmly.

Self-timer starts counting down from 10 with a beep sound. In the last two seconds of the countdown, the beep sound gets faster, then recording starts automatically.



To cancel self-timer recording

Press (self-timer) so that the indicator disappears from the LCD or viewfinder screen while your camcorder is in the standby mode. You cannot cancel self-timer recording with the Remote Commander.

Note

The self-timer recording mode is automatically canceled when:

- Self-timer recording is finished.
- The POWER switch is set to OFF (CHARGE), VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).

Запись неподвижного изображения на ленту - Фотосъемка на ленту

Съемка на ленту с помощью таймера самозапуска

Вы можете записывать неподвижные изображения на ленты с помощью таймера самозапуска. Этот режим является полезным, если Вы хотите выполнить съемку самого себя. Для этой операции Вы также можете использовать пульт дистанционного управления.

- (1) В режиме ожидания нажмите кнопку (таймера самозапуска). На экране ЖКД или в видоискателе появится индикатор (таймера самозапуска).
- (2) Нажмите кнопку PHOTO сильно. Таймер самозапуска начнет обратный отсчет времени от 10 с зуммерным сигналом. В последние две секунды обратного отсчета времени, частота зуммерного сигнала будет быстрее, а затем начнется запись.

Для отмены записи по таймеру самозапуска

Нажмите кнопку (таймера самозапуска), так чтобы индикатор исчез с экрана ЖКД или экрана видоискателя в то время, когда Ваша видеокамера находится в режиме ожидания. С помощью пульта дистанционного управления Вы не можете отменить запись по таймеру самозапуска.

Примечание

Режим записи по таймеру будет автоматически отменен, если:
- Переключатель POWER установлен в положение OFF (CHARGE), VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).

42

Recording a still image on a tape - Tape Photo recording

Printing the still image

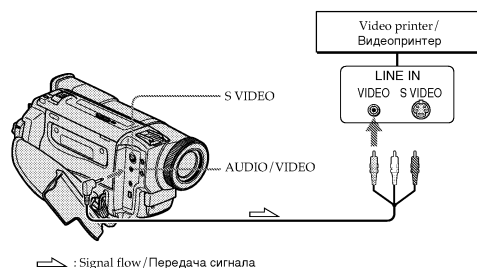
You can print a still image by using the video printer (not supplied). Connect the video printer using the A/V connecting cable supplied with your camcorder.

Connect the A/V connecting cable to the AUDIO/VIDEO jack and connect the yellow plug of the cable to the video input of the video printer. Refer to the operating instructions of the video printer as well.

Запись неподвижного изображения на ленту - Фотосъемка на ленту

Печатавание неподвижного изображения

Вы можете выполнить печатавание неподвижного изображения с помощью видеопринтера (не прилагается). Подсоедините видеопринтер с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере. Подсоедините соединительный кабель аудио/видео к выходному гнезду AUDIO/VIDEO и подсоедините желтый штекер кабеля к входному гнезду видеосигнала на видеопринтере. Воспользуйтесь также инструкцией по эксплуатации видеопринтера.



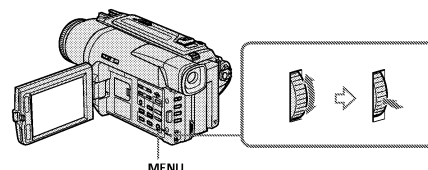
If the video printer is equipped with S video input
Use the S video connecting cable (not supplied). Connect it to the S VIDEO jack and the S video input of the video printer.

Если в видеопринтере имеется входное гнездо S видео
Используйте соединительный кабель S видео (не прилагается). Подсоедините его к гнезду S VIDEO и ко входному гнезду S видео на видеопринтере.

Using the wide mode

You can record a 16:9 wide picture to watch on the 16:9 wide-screen TV (16:9 WIDE). Black bands appear on the LCD screen or in the viewfinder during recording in 16:9 WIDE mode [a]. The picture during playing back on a normal TV [b] or a wide-screen TV [c] are compressed in the widthwise direction. If you set the screen mode of the wide-screen TV to the full mode, you can watch pictures of normal images [d].

In the standby mode, set 16:9WIDE to ON in the menu settings (p. 85).



To cancel the wide mode

Set 16:9WIDE to OFF in the menu settings.

In the wide mode, you cannot select the following functions:

- Old movie
- Bounce

During recording

You cannot select or cancel the wide mode. When you cancel the wide mode, set your camcorder to the standby mode and then set 16:9WIDE to OFF in the menu setting.

Использование широкоэкранный режима

Вы можете записывать широкоформатное изображение 16:9 для просмотра на широкоэкранный телевизор формата 16:9 (16:9 WIDE).

Во время записи в режиме 16:9 WIDE на экране ЖКД или в видоискателе появятся черные полосы [a]. Изображение во время воспроизведения в видоискателе, на обычном телевизоре [b] или на широкоэкранном телевизоре [c] будет сжато по ширине. Если Вы установите режим экрана широкоэкранный телевизор в полноэкранный режим, Вы сможете наблюдать обычные изображения без искажений [d].

В режиме ожидания установите команду 16:9WIDE в положение ON в установках меню (стр. 85).

Для отмены широкоэкранный режима
Установите команду 16:9WIDE в положение OFF в установках меню.

В широкоэкранный режиме Вы не можете выбирать следующие функции:
- Старинное кино
- Перескакивание

Во время записи

Вы не можете выбрать или отменить широкоэкранный режим. Если Вы отмените широкоэкранный режим, установите Вашу видеокамеру в режим ожидания, а затем установите команду 16:9WIDE в положение OFF.

44

Advanced Recording Operations

Усовершенствованные операции съемки

43

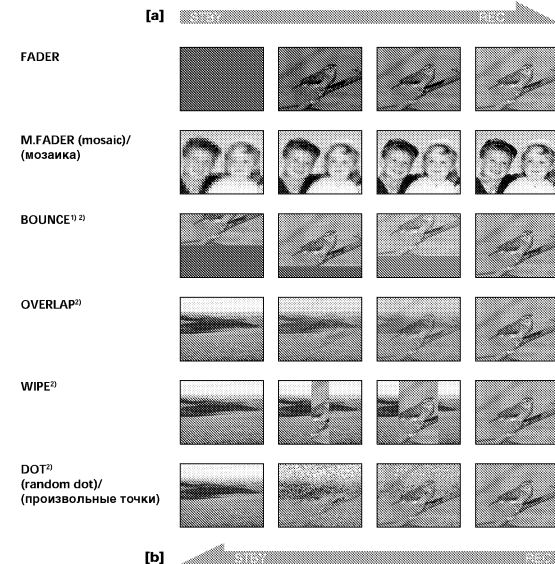
Advanced Recording Operations

Усовершенствованные операции съемки

45

Using the fader function

You can fade the picture in or out to give your recording a professional appearance.



MONOTONE

When fading in, the picture gradually changes from black-and-white to colour.
When fading out the picture gradually changes from colour to black-and-white.

¹⁾ You can use this function when D ZOOM is set to OFF in the menu settings.

²⁾ Fade in only

Использование функции фейдера

Вы можете выполнять плавное введение и выведение изображения, чтобы придать Вашей съемке профессиональный вид.

MONOTONE

При введении изображение будет постепенно изменяться от черно-белого до цветного.
При выведении изображение будет постепенно изменяться от цветного до черно-белого.

¹⁾ Вы можете использовать эту функцию только если команда D ZOOM установлена в положение OFF в установке меню.

²⁾ Только введение изображения

Using the fader function

(1) When fading in [a]

In the standby mode, press FADER until the desired fader indicator flashes.

When fading out [b]

In the recording mode, press FADER until the desired fader indicator flashes.

The indicator changes as follows:
FADER → M.FADER → BOUNCE → MONOTONE → OVERLAP → WIPE → DOT

The last selected fader mode is indicated first of all.

(2) Press START/STOP. The fader indicator stops flashing.

After the fade in/out is carried out, your camcorder automatically returns to the normal mode.

Использование функции фейдера

(1) При введении изображения [a]

В режиме ожидания, нажимайте кнопку FADER до тех пор, пока не начнет мигать нужный индикатор фейдера.

При выведении изображения [b]

В режиме записи, нажимайте кнопку FADER до тех пор, пока не начнет мигать нужный индикатор фейдера.

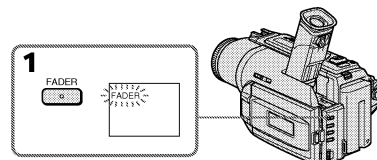
Индикатор будет изменяться следующим образом:

FADER → M.FADER → BOUNCE → MONOTONE → OVERLAP → WIPE → DOT

Последний из выбранных режимов фейдера отображается первым.

(2) Нажмите кнопку START/STOP. Индикатор фейдера перестанет мигать.

После того, как выполнено введение/выведение изображения, Ваша видеосъемка автоматически вернется в обычный режим.



To cancel the fader function

Before pressing START/STOP, press FADER until the indicator disappears.

Для отмены функции фейдера

Перед тем, как нажать кнопку START/STOP, нажимайте кнопку FADER до тех пор, пока не исчезнет индикатор.

Using the fader function

Notes

- The overlap, wipe and dot functions work only for tapes recorded in the Digital8 system.
- You cannot use the following functions while using the fader function. Also, you cannot use the fader function while using the following functions:
 - Digital effect
 - Low lux mode of PROGRAM AE (Overlap, wipe or dot function only)
 - Super NightShot
 - Tape photo recording

Before operating the overlap, wipe or dot function

Your camcorder stores the image on the tape. As the image is being stored, the indicator flashes quickly, and the image you are shooting disappears from the LCD or viewfinder screen. Depending on the tape condition, the image may not be recorded clearly.

While using the bounce function, you cannot use the following functions:

- Focus
- Zoom
- Picture effect

Note on the bounce function

The BOUNCE indicator does not appear in the following mode or functions:

- D ZOOM is activated in the menu settings
- Wide mode
- Picture effect
- PROGRAM AE

Использование функции фейдера

Примечания

- Функция наложения изображения работает только для лент, записанных в цифровой системе Digital8.
- Вы не можете использовать следующие функции во время использования функции фейдера. Также, Вы не можете использовать функцию фейдера во время использования следующих функций:
 - Цифровой эффект
 - Режим низкой освещенности PROGRAM AE (только функция наложения/вытеснения штормой или точечного изображения)
 - Ночная суперсъемка
 - Фотосъемка

Если Вы не записывали ничего перед включением функции наложения изображения

Ваша видеосъемка хранит изображение на ленте. Во время сохранения изображения индикатор мигает быстро, а изображение, которое Вы снимаете, исчезнет с экрана ЖКД или экрана видеосъемателя. В зависимости от состояния ленты, изображение может быть записано нечетко.

Во время использования функции перескакивания Вы не можете использовать следующие функции:

- Фокусировка
- Трансфокация
- Эффект изображения

Примечание по функции перескакивания

Индикатор BOUNCE не появляется в следующих режимах или при использовании следующих функций:

- Команда D ZOOM приведена в действие в установках меню
- Широкоэкранный режим
- Эффект изображения
- PROGRAM AE

Using special effects - Picture effect

You can digitally process images to obtain special effects like those in films or on the TV.

NEG. ART [a]

The colour and brightness of the image is reversed.

SEPIA :

The image is sepia.

B&W :

The image is monochrome (black-and-white).

SOLARIZE [b]

The light intensity is clearer, and the image looks like an illustration.

SLIM [c]

The image expands vertically.

STRETCH [d]

The image expands horizontally.

PASTEL [e]

The contrast of the image is emphasized, and the image looks like an animated cartoon.

MOSAIC [f]

The image is mosaic.

Использование специальных эффектов - Эффект изображения

Вы можете выполнять обработку изображения цифровым методом для получения специальных эффектов, как в кинофильмах или на экранах телевизоров.

NEG. ART [a]

Цвет и яркость изображения будут негативными.

SEPIA :

Изображение будет в цвете сепии.

B&W :

Изображение будет монохроматическим (черно-белым).

SOLARIZE [b]

Яркость света будет усиленной, а изображение будет выглядеть как иллюстрация.

SLIM [c]

Изображение растянется по вертикали.

STRETCH [d]

Изображение растянется по горизонтали.

PASTEL [e]

Подчеркивается контрастность изображения, которому придается мультипликационный вид.

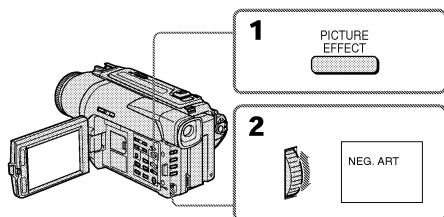
MOSAIC [f]

Изображение будет мозаическим.



Using special effects - Picture effect

- (1) Press PICTURE EFFECT in CAMERA mode. The picture effect indicator appears.
- (2) Turn the SEL/PUSH EXEC dial to select the desired picture effect mode. The indicator changes as follows:
NEG.ART ↔ SEPIA ↔ B&W ↔ SOLARIZE ↔ SLIM ↔ STRETCH ↔ PASTEL ↔ MOSAIC



To turn the picture effect function off
Press PICTURE EFFECT.

While using the picture effect function
You cannot select OLD MOVIE with DIGITAL EFFECT.

When you turn the power off
The picture effect is automatically canceled.

Использование специальных эффектов - Эффект изображения

- (1) Нажмите кнопку PICTURE EFFECT в режиме CAMERA. Появится индикатор эффекта изображения.
- (2) Поверните диск SEL/PUSH EXEC для выбора режима нужного эффекта изображения. Индикатор будет изменяться следующим образом:
NEG.ART ↔ SEPIA ↔ B&W ↔ SOLARIZE ↔ SLIM ↔ STRETCH ↔ PASTEL ↔ MOSAIC

Для выключения функции эффекта изображения
Нажмите кнопку PICTURE EFFECT.

При использовании функции эффекта изображения
Вы не можете выбрать режим OLD MOVIE кино с помощью функции DIGITAL EFFECT.

Если Вы выключите питание
Ваша видеокамера автоматически вернется в обычный режим.

Using special effects - Digital effect

You can add special effects to recorded images using the various digital functions. The sound is recorded normally.

STILL
You can record a still image so that it is superimposed on a moving image.

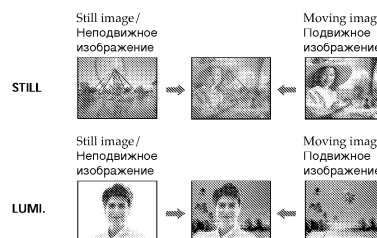
FLASH (FLASH MOTION)
You can record still images successively at constant intervals.

LUMI. (LUMINANCEKEY)
You can swap a brighter area in a still image with a moving image.

TRAIL
You can record the image so that an incidental image like a trail is left.

SLOW SHTR (SLOW SHUTTER)
You can slow down the shutter speed. The slow shutter mode is good for recording dark images more brightly. However, the image may be less clear.

OLD MOVIE
You can add an old movie type atmosphere to images. Your camcorder automatically sets the wide mode to ON, picture effect to SEPIA, and the appropriate shutter speed.



Использование специальных эффектов - Цифровой эффект

Вы можете добавлять специальные эффекты к записываемому изображению с помощью разных цифровых функций. Записываемый звук будет обычным.

STILL
Вы можете записывать неподвижное изображение, которое можно налагать на подвижное изображение.

FLASH (FLASH MOTION)
Вы можете записывать неподвижные изображения в последовательности через определенные интервалы.

LUMI. (LUMINANCEKEY)
Вы можете изменять яркие места на неподвижном изображении на подвижные изображения.

TRAIL
Вы можете записывать изображение с эффектом запаздывания.

SLOW SHTR (SLOW SHUTTER)
Вы можете замедлить скорость затвора. Режим медленного затвора является подходящим для записи темных изображений в более ярком свете. Однако, изображение может получиться менее четким.

OLD MOVIE
Вы можете привносить атмосферу старинного кино в изображения. Ваша видеокамера будет автоматически устанавливать широкоэкранный режим в положение ON, эффект изображения в положение SEPIA, и выставлять соответствующую скорость затвора.

Using special effects - Digital effect

- (1) Press DIGITAL EFFECT in CAMERA mode. The digital effect indicator appears.
- (2) Turn the SEL/PUSH EXEC dial to select the desired digital effect mode. The indicator changes as follows:
STILL ↔ FLASH ↔ LUMI. ↔ TRAIL ↔ SLOW SHTR ↔ OLD MOVIE
- (3) Press the SEL/PUSH EXEC dial. The indicator lights up and the bars appear. In the STILL and LUMI. modes, the still image is stored in memory.
- (4) Turn the SEL/PUSH EXEC dial to adjust the effect as follows:

STILL - The rate of the still image you want to superimpose on the moving image
FLASH - The interval of flash motion
LUMI. - The colour scheme of the area in the still image which is to be swapped with a moving image
TRAIL - The vanishing time of the incidental image
SLOW SHTR - Shutter speed. The larger the shutter speed number, the slower the shutter speed.
OLD MOVIE - No adjustment necessary

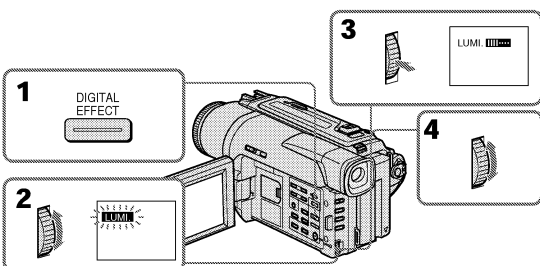
The more bars there are on screen, the stronger the digital effect. The bars appear in the following modes: STILL, FLASH, LUMI. and TRAIL.

Использование специальных эффектов - Цифровой эффект

- (1) Нажмите кнопку DIGITAL EFFECT в режиме CAMERA. Появится индикатор цифрового эффекта.
- (2) Поверните диск SEL/PUSH EXEC для выбора режима нужного цифрового эффекта. Индикатор будет изменяться следующим образом:
STILL ↔ FLASH ↔ LUMI. ↔ TRAIL ↔ SLOW SHTR ↔ OLD MOVIE
- (3) Нажмите диск SEL/PUSH EXEC. Высветится индикатор и появятся полосы. В режимах STILL и LUMI. неподвижное изображение будет сохранено в памяти.
- (4) Поверните диск SEL/PUSH EXEC для регулировки эффекта следующим образом:

STILL - Интенсивность неподвижного изображения, которое Вы хотите наложить на подвижное изображение
FLASH - Интервал прерывистого движения
LUMI. - Цветовая гамма участка на неподвижном изображении, который будет заменен на подвижное изображение
TRAIL - Время исчезновения побочного изображения
SLOW SHTR - Скорость затвора. Чем больше величина скорости затвора, тем медленнее скорость затвора
OLD MOVIE - Не требуется никаких регулировок

Чем больше полос на экране, тем сильнее цифровой эффект. Полосы появляются в следующих режимах: STILL, FLASH, LUMI. и TRAIL.



Using special effects - Digital effect

To cancel the digital effect
Press DIGITAL EFFECT.

- Notes**
- The following functions do not work during digital effect:
- Fader
- Low lux mode of PROGRAM AE
- Tape photo recording
- Super NightShot
 - The following functions do not work in the slow shutter mode:
- Exposure
- PROGRAM AE
 - The following functions do not work in the old movie mode:
- Exposure
- Wide mode
- Picture effect
- PROGRAM AE

When you turn the power off
The digital effect is automatically canceled.

When recording in the slow shutter mode
Auto focus may not be effective. Focus manually using a tripod.

| Shutter speed number | Shutter speed |
|----------------------|---------------|
| SLOW SHTR 1 | 1/25 |
| SLOW SHTR 2 | 1/12 |
| SLOW SHTR 3 | 1/6 |
| SLOW SHTR 4 | 1/3 |

Использование специальных эффектов - Цифровой эффект

Для отмены цифрового эффекта
Нажмите кнопку DIGITAL EFFECT.

- Примечания**
- Следующие функции не работают при использовании цифрового эффекта:
- Фейдер
- Режим низкой освещенности PROGRAM AE
- Фотосъемка на ленту
- Ночная суперсъемка
 - Следующие функции не работают в режиме медленного затвора:
- Экспозиция
- PROGRAM AE
 - Следующие функции не работают в режиме старинного кино:
- Экспозиция
- Широкоэкранный режим
- Эффект изображения
- PROGRAM AE

При выключении питания
Цифровой эффект будет автоматически отменен.

При записи в режиме медленного затвора
Автоматическая фокусировка может быть не эффективной. Выполните фокусировку вручную, используя штатив.

| Скорость затвора | Величина скорости затвора | Скорость затвора |
|------------------|---------------------------|------------------|
| SLOW SHTR1 | 1/25 | |
| SLOW SHTR2 | 1/12 | |
| SLOW SHTR3 | 1/6 | |
| SLOW SHTR4 | 1/3 | |

Using the PROGRAM AE function

You can select PROGRAM AE (Auto Exposure) mode to suit your specific shooting requirements.

Spotlight mode

This mode prevents people's faces, for example, from appearing excessively white when shooting subjects lit by strong light in the theatre.

Soft portrait mode

This mode brings out the subject while creating a soft background for subjects such as people or flowers.

Sports lesson mode

This mode minimizes shake on fast-moving subjects such as in tennis or golf.

Beach & ski mode

This mode prevents people's faces from appearing dark in strong light or reflected light, such as at a beach in midsummer or on a ski slope.

Sunset & moon mode

This mode allows you to maintain atmosphere when you are recording sunsets, general night views, fireworks displays and neon signs.

Landscape mode

This mode is for when you are recording distant subjects such as mountains and prevents your camcorder from focusing on glass or metal mesh in windows when you are recording a subject behind glass or a screen.

Low lux mode

This mode makes subjects brighter in insufficient light.



54

Использование функции PROGRAM AE

Вы можете выбрать режим PROGRAM AE (автоматическая съемка) в соответствии со специфическими требованиями к съемке.

Режим прожекторного освещения

Данный режим предотвращает, к примеру, лица людей от появления в чрезмерно белом свете при выполнении съемки людей, освещенных сильным светом на свадебных церемониях или в театре.

Мягкий портретный режим

Этот режим позволяет выделить объект на фоне мягкого фона, и подходит для съемки, например, людей или цветов.

Режим спортивных состязаний

Этот режим позволяет минимизировать дрожание при съемке быстро движущихся предметов, например, при игре в теннис или гольф.

Пляжный и лыжный режим

Этот режим предотвращает появление темных лиц людей в зоне сильного света или отраженного света, например, на пляже в разгар лета или на снежном склоне.

Режим захода солнца и луны

Этот режим позволяет в точности отражать обстановку при съемке заходов солнца, общих ночных видов, фейерверков и неоновых реклам.

Ландшафтный режим

Этот режим позволяет выполнять съемку отдаленных объектов, таких как горы, например, и предотвращает фокусировку видеокамеры на стекло или металлическую решетку на окнах, когда Вы выполняете запись объектов позади стекла или решетки.

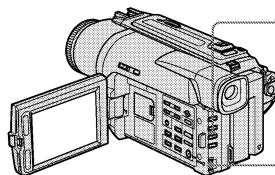
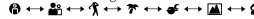
Режим низкой освещенности

Этот режим делает объекты ярче при недостаточном освещении.

Using the PROGRAM AE function

- Press PROGRAM AE in CAMERA or MEMORY mode. The PROGRAM AE indicator appears.
- Turn the SEL/PUSH EXEC dial to select the desired mode.

The indicator changes as follows:



To turn the PROGRAM AE function off
Press PROGRAM AE.

Notes

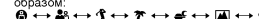
- In the spotlight, sports lesson and beach & ski modes, you cannot take close-ups. This is because your camcorder is set to focus only on subjects in the middle to far distance.
- In the sunset & moon and landscape modes, your camcorder is set to focus only on distant subjects.
- The following functions do not work in the PROGRAM AE mode:
 - Slow shutter
 - Old movie
 - Bounce
- The following functions do not work in the low lux mode:
 - Digital effect
 - Overlap
 - Wipe
 - Dot
 - Exposure
- While setting the NIGHTSHOT to ON, the PROGRAM AE function does not work. (The indicator flashes.)
- While shooting in MEMORY mode, the low lux mode does not work. (The indicator flashes.)

If you are recording under a discharge tube such as a fluorescent lamp, sodium lamp or mercury lamp
Flickering or changes in colour may occur in the following modes. If this happens, turn the PROGRAM AE function off:

- Soft portrait mode
- Sports lesson mode

Использование функции PROGRAM AE

- Нажмите кнопку PROGRAM AE в режиме CAMERA или MEMORY. Появится индикатор PROGRAM AE.
- Поверните диск SEL/PUSH EXEC для выбора нужного режима. Индикатор будет изменяться следующим образом:



Для выключения функции PROGRAM AE
Нажмите кнопку PROGRAM AE.

Примечания

- В режимах прожекторного освещения, спортивных состязаний, а также в пляжном и лыжном режиме Вы можете выполнять съемку крупным планом. Это объясняется тем, что Ваша видеокамера настроена для фокусировки только на объекты, находящиеся на среднем и дальнем расстоянии.
- В режиме захода солнца и луны, а также в ландшафтном режиме Ваша видеокамера настроена на фокусировку только на дальние объекты.
- Следующие функции не работают в режиме PROGRAM AE:
 - Медленный затвор
 - Старинное кино
 - Терескашивание
- Следующие функции не работают в режиме низкой освещенности:
 - Цифровой эффект
 - Наложение изображения
 - Ночная съемка
 - Точечное изображение
 - Экспозиция
- Во время установки команды NIGHTSHOT в положение ON, функция PROGRAM AE не работает. (Индикатор будет мигать.)
- Во время съемки в режиме MEMORY, режим низкой освещенности не работает. (Индикатор будет мигать.)

Если Вы выполняете запись при использовании газоразрядной лампы, натриевой лампы или ртутной лампы
В следующих режимах может возникнуть мерцание или неустойчивые процессы. Если это произойдет, выключите функцию PROGRAM AE.

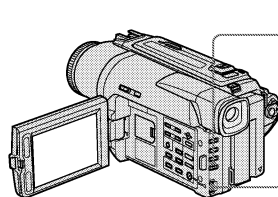
- Мягкий портретный режим
- Режим спортивных состязаний

Adjusting the exposure manually

You can manually adjust and set the exposure. Adjust the exposure manually in the following cases:

- The subject is backlit
- Bright subject and dark background
- To record dark pictures (e.g. night scenes) faithfully

- Press EXPOSURE in CAMERA or MEMORY mode.
The exposure indicator appears on the LCD screen or in the viewfinder.
- Turn the SEL/PUSH EXEC dial to adjust the brightness.



To return to the automatic exposure mode
Press EXPOSURE.

Notes

- When you adjust the exposure manually, the following function and modes do not work in CAMERA mode:
 - Backlight
 - Old movie
 - Slow shutter
- When you adjust the exposure manually, the backlight function does not work in MEMORY mode.

Your camcorder automatically returns to the automatic mode:

- if you change the PROGRAM AE mode
- if you slide NIGHTSHOT to ON

Регулировка экспозиции вручную

Вы можете отрегулировать и установить экспозицию вручную.

Отрегулируйте экспозицию вручную в следующих случаях:

- Объект на фоне задней подсветки
- Яркий объект на темном фоне
- Для записи темных изображений (например, ночных сцен) с большой достоверностью

- Нажмите кнопку EXPOSURE в режиме CAMERA или MEMORY.
На экране ЖКД или в видоискателе появится индикатор экспозиции.
- Поверните диск SEL/PUSH EXEC для регулировки яркости.

Для возврата в режим автоматической экспозиции
Нажмите кнопку EXPOSURE.

Примечания

- При выполнении регулировки экспозиции вручную, следующие функции и режимы не работают в режиме CAMERA:
 - Задняя подсветка
 - Старинное кино
 - Медленный затвор
- При выполнении регулировки экспозиции вручную, функция задней подсветки не работает в режиме MEMORY.

Ваша видеокамера автоматически вернется в режим автоматической экспозиции:

- если Вы измените режим PROGRAM AE
- если Вы передвинете переключатель NIGHTSHOT в положение ON

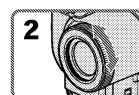
Focusing manually

You can gain better results by manually adjusting the focus in the following cases:

- The autofocus mode is not effective when shooting:
 - subjects through glass coated with water droplets,
 - horizontal stripes,
 - subjects with little contrast with backgrounds such as walls and sky.
- When you want to change the focus from a subject in the foreground to a subject in the background.
- Shooting a stationary subject when using a tripod.



- Set FOCUS to MANUAL in CAMERA or MEMORY mode. The FOCUS indicator appears on the LCD screen or in the viewfinder.
- Turn the focus ring to sharpen focus.



To return to the autofocus mode
Set FOCUS to AUTO.

To record distant subjects

When you press FOCUS down to INFINITY. The lens focuses on infinity and the infinity indicator appears. When you release FOCUS, your camcorder returns to the manual focus mode. Use this mode when your camcorder focuses on near objects even though you are trying to shoot a distant object.

Фокусировка вручную

Вы можете получить лучшие результаты путем регулировки вручную в следующих случаях:

- Режим автоматической фокусировки является неэффективным при выполнении съемки:
 - объектов через покрытое каплями стекло,
 - горизонтальных полос,
 - объектов с малой контрастностью на таком фоне, как стена или небо.
- Если Вы хотите выполнить изменение фокусировки с объекта на переднем плане на объект на заднем плане.
- При выполнении съемки стационарных объектов с использованием штатива.

Для возвращения в режим фокусировки
Установите переключатель FOCUS в положение AUTO.

Для съемки удаленных объектов
Если Вы нажмете вниз кнопку FOCUS в положение INFINITY. Объектив выполнит фокусировку на бесконечность, и появится индикатор. Если Вы отпустите кнопку FOCUS, Ваша видеокамера вернется в режим ручной фокусировки. Используйте этот режим, если Ваша видеокамера выполняет фокусировку на ближние объекты, даже если Вы пытаетесь выполнить съемку отдаленного объекта.

56

55

Focusing manually

To focus precisely

Adjust the zoom by first focusing at the "T" (telephoto) position and then shooting at the "W" (wide-angle) position. This makes focusing easier.

When you shoot close to the subject

Focus at the end of the "W" (wide-angle) position.

changes to the following indicators:

- ▲ when recording a distant subject.
- ▲ when the subject is too close to focus on.

Фокусировка вручную

Для точной фокусировки

Отрегулируйте объектив, сначала выполнив фокусировку в положении "Т" (телефото), а затем выполнив съемку в положении "W" (широкого угла охвата). Это упростит фокусировку.

При выполнении съемки вблизи объекта

Выполните фокусировку в конце положения "W" (широкого угла охвата).

Индикация изменится на следующие индикаторы:

- ▲ при записи удаленного объекта.
- ▲ если объект находится слишком близко, чтобы выполнить фокусировку на него.

Superimposing a title

You can select one of eight preset titles and two custom titles (p. 61). You can also select the language, colour, size and position of titles.

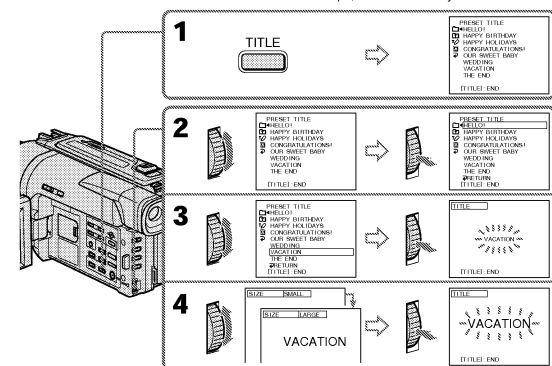
Наложение титра

Вы можете выбрать один из восьми предварительно установленных титров и двух собственных титров (стр. 61). Вы можете также выбрать язык, цвет, размер и положение титров.



- Press TITLE to display the title menu in the standby mode.
- Turn the SEL/PUSH EXEC dial to select , then press the dial.
- Turn the SEL/PUSH EXEC dial to select the desired title, then press the dial. The titles are displayed in the language you selected.
- Change the colour, size, or position, if necessary.
 - Turn the SEL/PUSH EXEC dial to select the colour, size, or position, then press the dial. The item appears.
 - Turn the SEL/PUSH EXEC dial to select the desired item, then press the dial.
 - Repeat steps ① and ② until the title is laid out as desired.
- Press the SEL/PUSH EXEC dial again to complete the setting.
- Press START/STOP to start recording.
- When you want to stop recording the title, press TITLE.

- Нажмите кнопку TITLE для отображения меню титров в режиме ожидания.
- Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажмите диск.
- Поверните диск SEL/PUSH EXEC для выбора нужного титра, а затем нажмите диск. Титры будут отображаться на выбранном Вами языке.
- Измените цвет, размер или положение титра, если нужно.
 - Поверните диск SEL/PUSH EXEC для выбора цвета, размера или положения титра, а затем нажмите диск.
 - Поверните диск SEL/PUSH EXEC для выбора нужного пункта, а затем нажмите диск.
 - Повторяйте пункты ① и ② до тех пор, пока титр не будет расположен так, как нужно.
- Нажмите диск SEL/PUSH EXEC для завершения установки.
- Нажмите кнопку START/STOP для начала записи.
- Если Вы захотите остановить запись титра, нажмите кнопку TITLE.



58

Superimposing a title

To superimpose the title while you are recording

Press TITLE while you are recording, and carry out steps 2 to 5. When you press the SEL/PUSH EXEC dial at step 5, the title is recorded.

To select the language of a preset title

If you want to change the language, select before step 2. Then select the desired language and return to step 2.

If you display the menu while superimposing a title

The title is not recorded while the menu is displayed.

To use the custom title

If you want to use the custom title, select in step 2.

If you have not made any custom title, "----" appears on the display.

Title setting

- The title colour changes as follows :
WHITE ↔ YELLOW ↔ VIOLET ↔ RED ↔ CYAN ↔ GREEN ↔ BLUE
- The title size changes as follows :
SMALL ↔ LARGE
You cannot input more than 12 characters in LARGE size.
- The title position changes as follows :
1 ↔ 2 ↔ 3 ↔ 4 ↔ 5 ↔ 6 ↔ 7 ↔ 8 ↔ 9
The larger the position number, the lower the title is positioned.
When you select the title size LARGE, you cannot choose position 9.

When you are selecting and setting the title

You cannot record the title displayed on the screen.

When you superimpose a title while you are recording

The beep does not sound.

While you are playing back

You can superimpose a title. However, the title is not recorded on tape.
You can record a title when you dub the tape connecting your camcorder with the VCR with the A/V connecting cable. If you use the iLINK cable instead of the A/V connecting cable, you cannot record the title.

Наложение титра

Для наложения титра во время записи

Нажмите кнопку TITLE во время записи и выполните действия пунктов 2-5. Если Вы нажмете диск SEL/PUSH EXEC в пункте 5, титр будет записан.

Для выбора языка предварительно установленного титра

Если Вы хотите изменить язык, выберите индикацию перед пунктом 2. Затем выберите нужный язык и вернитесь к пункту 2.

В случае отображения меню во время наложения титра

Титр не будет записываться во время отображения меню.

Для использования собственного титра

Если Вы хотите использовать собственный титр, выберите установку в пункте 2. Если Вы не сделали никакого собственного титра, на дисплее появится индикация "----".

Установка титра

• Цвет титра изменяется следующим образом:

WHITE (белый) ↔ YELLOW (желтый) ↔ VIOLET (фиолетовый) ↔ RED (красный) ↔ CYAN (голубой) ↔ GREEN (зеленый) ↔ BLUE (синий)

• Размер титра изменяется следующим образом:

SMALL (маленький) ↔ LARGE (большой)
Вы не можете ввести более 12 символов для размера титра LARGE.

• Позиция титра изменяется следующим образом:

1 ↔ 2 ↔ 3 ↔ 4 ↔ 5 ↔ 6 ↔ 7 ↔ 8 ↔ 9
Чем выше номер позиции титра, тем ниже расположен титр.

Если Вы выберете размер титра LARGE, Вы не сможете выбрать положение 9.

При выборе и установке титра

Вы не можете записать титр, отображаемый на экране.

При наложении титра во время записи

Зуммерный сигнал не будет звучать.

Во время воспроизведения

Вы можете наложить титр. Однако титр не будет записан на ленту.
Вы можете записать титр при перезаписи ленты, подсоединив Вашу видеокамеру к KVM с помощью соединительного кабеля аудио/видео. Если Вы используете кабель iLINK вместо соединительного кабеля аудио/видео, Вы не можете записать титры.

Making your own titles

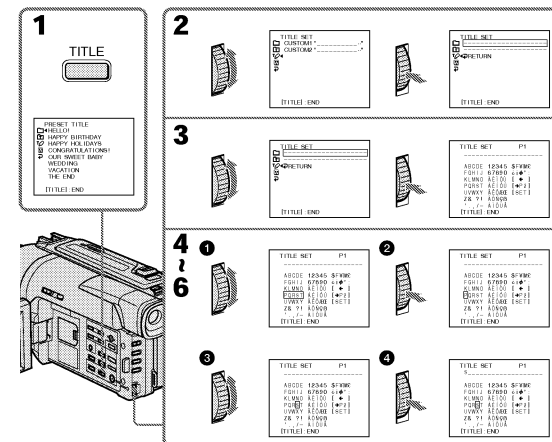
You can make up to two titles and store them in your camcorder. Each title can have up to 20 characters.

- Press TITLE in the standby, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E) mode.
- Turn the SEL/PUSH EXEC dial to select , then press the dial.
- Turn the SEL/PUSH EXEC dial to select the first line (CUSTOM1) or second line (CUSTOM2), then press the dial.
- Turn the SEL/PUSH EXEC dial to select the column of the desired character, then press the dial.
- Turn the SEL/PUSH EXEC dial to select the desired character, then press the dial.
- Repeat steps 4 and 5 until you have selected all characters and completed the title.
- To finish making your own titles, turn the SEL/PUSH EXEC dial to select [SET], then press the dial. The title is stored in memory.
- Press TITLE to make the title menu disappear.

Создание Ваших собственных титров

Вы можете составить до двух титров и сохранить их в памяти Вашей видеокамеры. Каждый титр может содержать до 20 символов.

- Нажмите кнопку TITLE в режиме ожидания, VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажмите диск.
- Поверните диск SEL/PUSH EXEC для выбора первой строки (CUSTOM1) или второй строки (CUSTOM2), а затем нажмите диск.
- Поверните диск SEL/PUSH EXEC для выбора колонки с нужным символом, а затем нажмите диск.
- Поверните диск SEL/PUSH EXEC для выбора нужного символа, а затем нажмите диск.
- Повторяйте пункты 4 и 5 до тех пор, пока Вы не выберете все символы и полностью не составите титр.
- Для завершения составления своих собственных титров поверните диск SEL/PUSH EXEC для выбора команды [SET], а затем нажмите диск. Титр будет сохранен в памяти.
- Нажмите кнопку TITLE, чтобы исчезло меню титров.



Advanced Recording Operations

Усовершенствованные операции съемки

Advanced Recording Operations

Усовершенствованные операции съемки

61

Making your own titles

To change a title you have stored

In step 3, select CUSTOM1 or CUSTOM2, depending on which title you want to change, then press the SEL/PUSH EXEC dial. Turn the SEL/PUSH EXEC dial to select [✎], then press the dial to delete the title. The last character is erased. Enter the new title as desired.

If you take 3 minutes or longer to enter characters in the standby mode while a cassette is in your camcorder

The power automatically goes off. The characters you have entered remain stored in memory. Set the POWER switch to OFF (CHARGE) once, and turn it to CAMERA again, then proceed from step 1.

We recommend setting the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E) or removing the cassette so that your camcorder does not automatically turn off while you are entering title characters.

If you select [➡P2]

The menu for selecting alphabet and Russian characters appear. Select [➡P1] to return to the previous screen.

To erase a character

Select [✎]. The last character is erased.

To enter a space

Select [Z& ?], then select the blank part.

Создание Ваших собственных титров

Для изменения сохраненного в памяти титра

В пункте 3 выберите установку CUSTOM1 или CUSTOM2, в зависимости от титра, который Вы хотите изменить, а затем нажмите диск SEL/PUSH EXEC. Поверните диск SEL/PUSH EXEC для выбора установки [✎], а затем нажмите диск для удаления титра. Последний символ будет стер. Введите новый нужный титр.

Если Вы вводите символы 3 минуты или более в режиме ожидания в то время, когда кассета находится в Вашей видеокамере

Питание выключится автоматически. Символы, которые Вы ввели, сохранятся в памяти видеокамеры. Установите сначала переключатель POWER в положение OFF (CHARGE), а затем снова в положение CAMERA, а затем начните с пункта 1.

Рекомендуется установить переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/ TRV520E) или вынуть кассету, чтобы Ваша видеокамера автоматически не выключалась во время ввода символов титра.

Если Вы выбрали установку [➡P2]

Появится меню для выбора алфавита и русских символов. Для возврата к прежнему экрану выберите установку [➡P1].

Для удаления титра

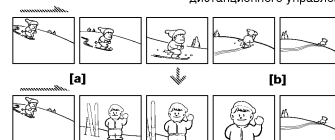
Выберите установку [✎]. Последний символ будет стер.

Для ввода интервала

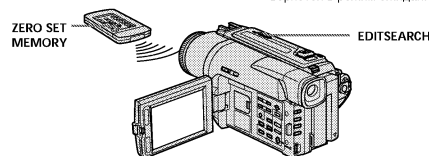
Выберите знак [Z& ?], а затем выберите пустую ячейку.

Inserting a scene

You can insert a scene in the middle of a recorded tape by setting the start and end points. The previously recorded frames between these start and end points will be erased. Use the Remote Commander for this operation.



- (1) While your camcorder is in the standby mode, keep pressing EDITSEARCH, and release the button at the insert end point [b].
- (2) Press ZERO SET MEMORY. The ZERO SET MEMORY indicator flashes and the counter resets to zero.
- (3) Keep pressing the — [a] side of EDITSEARCH and release the button at the insert start point [a].
- (4) Press START/STOP to start recording. The scene is inserted. Recording stops automatically near the counter zero point. Your camcorder returns to the standby mode.



Notes

- The zero set memory function works only for tapes recorded in the Digital8 system.
- The picture and the sound may be distorted at the end of the inserted section when it is played back.

If a tape has a blank portion in the recorded portions

The zero set memory function may not work correctly.

Вставка эпизода

Вы можете вставить эпизод в середине записанной ленты путем установки точек начала и окончания. Предыдущие записанные кадры между этими точками начала и окончания будут стерты. Вы можете выполнить это, используя пульт дистанционного управления.

- (1) В режиме ожидания видеокамеры, держите нажатой кнопку EDITSEARCH и отпустите кнопку в точке окончания эпизода [b].
- (2) Нажмите кнопку ZERO SET MEMORY. Начнет мигать индикатор ZERO SET MEMORY, а счетчик ленты будет установлен в нулевое положение.
- (3) Держите нажатой сторону — [a] кнопки EDITSEARCH и отпустите кнопку в точке начала эпизода [a].
- (4) Нажмите кнопку START/STOP для начала записи. Эпизод вставлен. Запись остановится автоматически в нулевой точке счетчика. Ваша видеокамера вернется в режим ожидания.

Примечания

- Функция памяти нуля не работает для лент, записанных в цифровой системе Digital8.
- Изображение и звук могут быть искажены в конце вставленного эпизода при воспроизведении.

Если на ленте имеется незаписанный участок

Функция памяти нуля может не работать надлежащим образом.

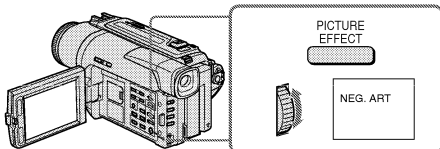
62

— Advanced Playback Operations —

Playing back a tape with picture effects

During playback, you can process a scene using the picture effect functions: NEG, ART, SEPIA, B&W and SOLARIZE.

During playback, press PICTURE EFFECT and turn the SEL/PUSH EXEC dial until the desired picture effect indicator (NEG, ART, SEPIA, B&W or SOLARIZE) appears. For details of each picture effect function, see page 49.



To cancel the picture effect function

Press PICTURE EFFECT.

Notes

- The picture effect function works only for tapes recorded in the Digital8 system.
- You cannot process externally input scenes using the picture effect function.
- You cannot record pictures that you have processed using the picture effect function with this camcorder. To record pictures that you have processed using the picture effect function, record the pictures on the VCR using your camcorder as a player.

Pictures processed by the picture effect function

Pictures processed by the picture effect function are not output through the DV IN/OUT or DV OUT jack.

When you set the POWER switch to OFF (CHARGE) or stop playing back the picture effect function is automatically canceled.

— Усовершенствованные операции воспроизведения —

Воспроизведение ленты с эффектами изображения

Во время воспроизведения, Вы можете видоизменять изображение с помощью функций: NEG, ART, SEPIA, B&W и SOLARIZE.

Во время воспроизведения, нажмите кнопку PICTURE EFFECT и поворачивайте диск SEL/PUSH EXEC до тех пор, пока не начнет мигать индикатор нужного цифрового (NEG, ART, SEPIA, B&W и SOLARIZE). Подробные сведения по каждой функции цифровых эффектов приведены на стр. 49.

Для отмены функции цифровых эффектов

Нажмите кнопку PICTURE EFFECT.

Примечания

- Функция эффектов изображения работает только для лент, записанных в цифровой системе Digital8.
- Вы не можете видоизменять изображения от KVM или телевизора с помощью функции эффектов изображения.
- Вы не можете записывать обработанные изображения с помощью функции эффектов изображения на данной видеокамере. Для записи изображения с использованием эффектов изображения, запишите изображения на KVM, используя Вашу видеокамеру в качестве плеера.

Изображения, обработанные с помощью функции эффектов изображения

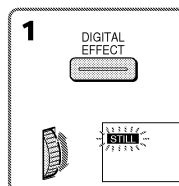
Изображения, обработанные с помощью функции эффектов изображения, не передаются через гнездо DV IN/OUT или DV OUT.

Если Вы установили переключатель POWER в положение OFF (CHARGE) или остановили воспроизведение, функция эффектов изображения будет автоматически отменена.

Playing back a tape with digital effects

During playback, you can process a scene using the digital effect functions: STILL, FLASH, LUMI, and TRAIL.

- (1) During playback, press DIGITAL EFFECT and turn the SEL/PUSH EXEC dial until the desired digital effect indicator (STILL, FLASH, LUMI, or TRAIL) flashes.
- (2) Press the SEL/PUSH EXEC dial. The digital effect indicator lights up and the bars appear. In the STILL or LUMI mode, the image where you press the SEL/PUSH EXEC dial is stored in memory as a still image.
- (3) Turn the SEL/PUSH EXEC dial to adjust the effect. For details of each digital effect function, see page 51.



To cancel the digital effect function

Press DIGITAL EFFECT.

Notes

- The digital effect function works only for tapes recorded in the Digital8 system.
- You cannot process externally input scenes using the digital effect function.
- You cannot record images that you have processed using the digital effect function with this camcorder. To record images that you have processed using the digital effect function, record the images on the VCR using your camcorder as a player.

Pictures processed by the digital effect function

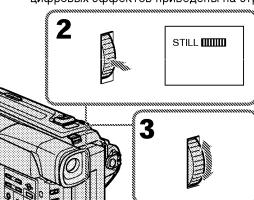
Pictures processed by the digital effect function are not output through the DV IN/OUT or DV OUT jack.

When you set the POWER switch to OFF (CHARGE) or stop playing back the digital effect function is automatically canceled.

Воспроизведение ленты с цифровыми эффектами

Во время воспроизведения, Вы можете видоизменять изображение с помощью функций: STILL, FLASH, LUMI, и TRAIL.

- (1) Во время воспроизведения, нажмите кнопку DIGITAL EFFECT и поворачивайте диск SEL/PUSH EXEC до тех пор, пока не начнет мигать индикатор нужного цифрового эффекта (STILL, FLASH, LUMI, или TRAIL).
- (2) Нажмите диск SEL/PUSH EXEC. Высветится индикатор цифрового эффекта и появятся полосы. В режиме STILL или LUMI, изображение, на котором Вы нажмете диск SEL/PUSH EXEC, будет занесено в память как неподвижное изображение.
- (3) Поверните диск SEL/PUSH EXEC для регулировки эффекта изображения. Подробные сведения по каждой функции цифровых эффектов приведены на стр. 51.



Для отмены функции цифровых эффектов

Нажмите кнопку DIGITAL EFFECT.

Примечания

- Функция цифровых эффектов работает только для лент, записанных в цифровой системе Digital8.
- Вы не можете видоизменять изображения от KVM или телевизора с помощью функции цифровых эффектов.
- Вы не можете записывать обработанные изображения с помощью функции цифровых эффектов на данной видеокамере. Для записи изображения с цифровыми эффектами, запишите изображения на KVM, используя Вашу видеокамеру в качестве плеера.

Изображения, обработанные с помощью функции цифровых эффектов

Изображения, обработанные с помощью функции цифровых эффектов, не передаются через гнездо DV IN/OUT или DV OUT.

Если Вы установили переключатель POWER в положение OFF (CHARGE) или остановили воспроизведение, функция цифровых эффектов будет автоматически отменена.

63

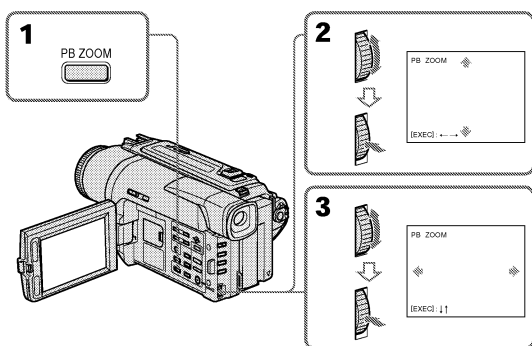
64

65

Enlarging recorded images – PB ZOOM

You can enlarge moving and still images recorded on tapes. Besides the operation described here, your camcorder can enlarge still images recorded on "Memory Stick".

- (1) Press PB ZOOM on your camcorder while you are playing back. The image is enlarged, and \uparrow appears on the LCD screen or in the viewfinder.
- (2) Turn SEL/PUSH EXEC dial to move the enlarged image, then press the dial.
 \uparrow : The image moves downwards.
 \downarrow : The image moves upwards.
 \leftarrow becomes available.
- (3) Turn SEL/PUSH EXEC dial to move the enlarged image, then press the dial.
 \leftarrow : The image moves rightward.
 (Turn the dial downwards.)
 \rightarrow : The image moves leftward.
 (Turn the dial upwards.)



To cancel PB ZOOM function
Press PB ZOOM.

Увеличение записанных изображений – PB ZOOM

Вы можете увеличивать движущиеся и неподвижные изображения, записанные на ленты.

- Помимо операций, описанных в данном руководстве, Ваша видеокамера позволяет увеличивать неподвижные изображения, записанные на "Memory Stick".
- (1) Нажмите кнопку PB ZOOM на Вашей видеокамере во время воспроизведения. Изображение увеличится, а на экране ЖКД или в видоискателе появится индикация \uparrow .
 - (2) Поверните диск SEL/PUSH EXEC для перемещения увеличенного изображения, а затем нажмите диск.
 \uparrow : Изображение перемещается вниз.
 \downarrow : Изображение перемещается вверх.
 \leftarrow появится на дисплее.
 - (3) Поверните диск SEL/PUSH EXEC для перемещения увеличенного изображения, а затем нажмите диск.
 \leftarrow : Изображение перемещается вправо (поверните диск вниз.)
 \rightarrow : Изображение перемещается влево (поверните диск вверх.)

Для отмены функции PB ZOOM
Нажмите кнопку PB ZOOM.

Enlarging recorded images – PB ZOOM

Notes

- PB ZOOM works only for tapes recorded in the Digital8 $\mathbf{8}$ system.
- You cannot process externally input scenes using PB ZOOM function.
- You cannot record pictures that you have processed using PB ZOOM function with this camcorder. To record pictures that you have processed using PB ZOOM function, record the pictures on the VCR using your camcorder as a player.

Pictures processed by PB ZOOM function

Pictures processed by PB ZOOM function are not output through the $\mathbf{8}$ DV IN/OUT or $\mathbf{8}$ DV OUT jack.

When you set the POWER switch to OFF (CHARGE) or stop playing back
PB ZOOM function is automatically canceled.

Увеличение записанных изображений – PB ZOOM

Примечания

- Функция PB ZOOM работает только для лент, записанных в системе Digital8 $\mathbf{8}$.
- Вы не можете обрабатывать введенные с внешней аппаратуры изображения с помощью функции PB ZOOM.
- Вы не можете записывать изображения, обработанные с помощью функции PB ZOOM, на данной видеокамере. Для записи изображений, обработанных с помощью функции PB ZOOM, запишите изображения на KBM с помощью видеокамеры, используя ее в качестве плеера.

Изображения, обработанные с помощью функции PB ZOOM

Изображения, обработанные с помощью функции PB ZOOM, не передаются через гнездо $\mathbf{8}$ DV IN/OUT или $\mathbf{8}$ DV OUT.

Если Вы установите переключатель POWER в положение OFF (CHARGE) или остановите воспроизведение
Функция PB ZOOM будет автоматически отменена.

Advanced Playback Operations

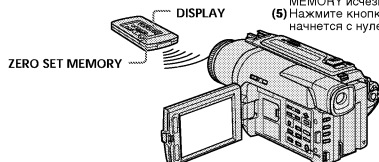
Усовершенствованные операции воспроизведения

66

Quickly locating a scene using the zero set memory function

Your camcorder goes forward or backward to automatically stop at a desired scene having a counter value of "00:00". Use the Remote Commander for this operation.

- (1) In the playback mode, press DISPLAY.
- (2) Press ZERO SET MEMORY at the point you want to locate later. The counter shows "00:00" and the ZERO SET MEMORY indicator flashes.
- (3) Press \blacksquare when you want to stop playback.
- (4) Press \blacktriangleleft to rewind the tape to the counter's zero point. The tape stops automatically when the counter reaches approximately zero. The ZERO SET MEMORY indicator disappears and the time code appears.
- (5) Press \blacktriangleright . Playback starts from the counter's zero point.



Notes

- The zero set memory function works only for tapes recorded in the Digital8 $\mathbf{8}$ system.
- When you press ZERO SET MEMORY before rewinding the tape, the zero set memory function is canceled.
- There may be a discrepancy of several seconds from the time code.

If a tape has a blank portion in the recorded portions
The zero set memory function may not correctly.

ZERO SET MEMORY functions also in the standby mode

When you insert a scene in the middle of a recorded tape, press ZERO SET MEMORY at the point you want to end the insertion. Rewind the tape to the insert start point, and start recording. Recording stops automatically at the tape counter zero point. Your camcorder returns to the standby mode.

Быстрое отыскание эпизода с помощью функции памяти нулевой отметки

Ваша видеокамера выполнит продвижение вперед или назад с автоматической остановкой в нужном эпизоде, где показание счетчика равно "00:00". Вы можете выполнять это с помощью пульта дистанционного управления.

- (1) В режиме воспроизведения нажмите кнопку DISPLAY.
- (2) Нажмите кнопку ZERO SET MEMORY в месте, которое Вы захотите найти позже. Показание счетчика станет равным "00:00", и начнет мигать индикатор ZERO SET MEMORY.
- (3) Нажмите кнопку \blacksquare , если Вы захотите остановить воспроизведение.
- (4) Нажмите кнопку \blacktriangleleft для ускоренной перемотки ленты назад к нулевой точке счетчика. Лента остановится автоматически, если счетчик достигнет нулевой отметки. Индикатор ZERO SET MEMORY исчезнет, и появится код времени.
- (5) Нажмите кнопку \blacktriangleright . Воспроизведение начнется с нулевой отметки счетчика.

Примечания

- Функция памяти нулевой отметки работает только для лент, записанных в цифровой системе Digital8 $\mathbf{8}$.
- Если Вы нажмете кнопку ZERO SET MEMORY до начала обратной перемотки ленты, то функция памяти нулевой отметки будет отменена.
- Может быть расхождение в несколько секунд между кодом времени и действительным временем.

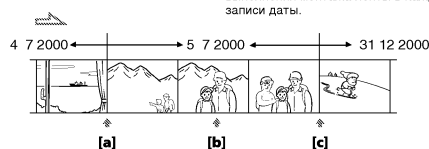
Если на ленте имеется незаписанный участок между записанными изображениями
Функция памяти нулевой отметки может не работать надлежащим образом.

Функция ZERO SET MEMORY также работает в режиме ожидания
Если Вы хотите вставить эпизод в середине записанной ленты, нажмите кнопку ZERO SET MEMORY в том месте, где Вы хотите закончить вставку. Перемотайте ленту к месту начала вставки и начните запись. Запись автоматически остановится в месте нулевой отметки счетчика ленты. Ваша видеокамера вернется в режим ожидания.

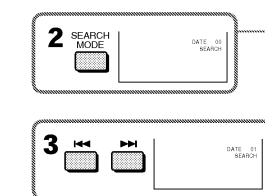
Searching a recording by date – Date search

You can automatically search for the point where the recording date changes and start playback from that point (Date search). Use the Remote Commander for this operation.

Use this function to check where recording dates change or to edit the tape at each recording date.



- (1) Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- (2) Press SEARCH MODE on the Remote Commander repeatedly, until the date search indicator appears.
The indicator changes as follows:
DATE SEARCH \rightarrow PHOTO SEARCH \rightarrow PHOTO SCAN
- (3) When the current position is [b], press \blacktriangleleft to search towards [a] or press \blacktriangleright to search towards [c]. Your camcorder automatically starts playback at the point where the date changes.
Each time you press \blacktriangleleft or \blacktriangleright , the camcorder searches for the previous or next date.



To stop searching
Press \blacksquare .

Поиск записи по дате – Поиск даты

Вы можете выполнять автоматический поиск места, где изменяется дата записи и начинать воспроизведение с этого места (поиск даты). Используйте пульт дистанционного управления для таких операций.

Используйте эту функцию для проверки, где изменяются даты записи, или же для выполнения монтажа ленты в каждом месте записи даты.

- (1) Установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- (2) Нажмите повторно кнопку SEARCH MODE на пульте дистанционного управления до тех пор, пока не появится индикатор поиска даты. Индикатор будет изменяться следующим образом: DATE SEARCH \rightarrow PHOTO SEARCH \rightarrow PHOTO SCAN
- (3) Если текущее положение соответствует варианту [b], нажмите кнопку \blacktriangleleft для выполнения поиска в направлении [a] или нажмите кнопку \blacktriangleright для выполнения поиска в направлении [c]. Ваша видеокамера автоматически начнет воспроизведение в месте, где изменяется дата. Всякий раз при нажатии кнопки \blacktriangleleft или \blacktriangleright , видеокамера будет выполнять поиск предыдущей или следующей даты.

Для остановки поиска
Нажмите кнопку \blacksquare .

Advanced Playback Operations

Усовершенствованные операции воспроизведения

68

69

Searching a recording by date – Date search

Notes

- The date search works only for tapes recorded in the Digital8 system.
- If one day's recording is less than two minutes, your camcorder may not accurately find the point where the recording date changes.

If a tape has a blank portion in the recorded portions

The date search function may not work correctly.

Поиск записи по дате – Поиск даты

Примечания

- Режим поиска даты функционирует только для лент, записанных в цифровой системе Digital8.
- Если в какой-либо из дней Ваша запись продолжалась менее одной минуты, Ваша видеокамера может точно не найти место, где изменяется дата записи.

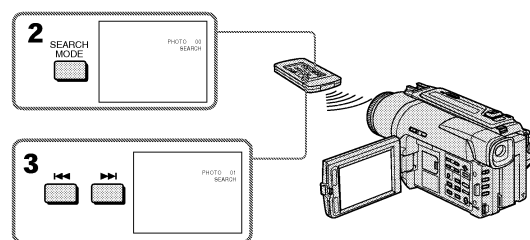
Если на записанной ленте имеются незаписанные участки
Функция поиска даты будет работать неправильно.

Searching for a photo – Photo search/ Photo scan

You can search for the still image recorded on tape (photo search).
You can also search for still image one after another and display each image for five seconds automatically (photo scan). Use the Remote Commander for these operations.

Searching for a photo

- Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- Press SEARCH MODE on the Remote Commander repeatedly, until the photo search indicator appears.
The indicator changes as follows:
DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
- Press **◀▶** or **▶▶** to select the photo for playback. Each time you press **◀▶** or **▶▶**, the camcorder searches for the previous or next photo. Your camcorder automatically starts playback from the photo.



To stop searching
Press **■**.

Поиск фото – Фотопоиск/ Фотосканирование

Вы можете выполнять поиск изображения записанного на ленту (фотопоиск). Вы также можете выполнять поиск неподвижных изображений одно за другим и отображать каждое изображение пять секунд автоматически (фотосканирование). Используйте пульт дистанционного управления для этих операций.

Поиск фото

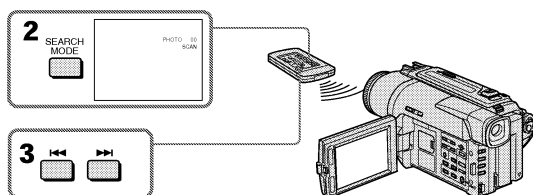
- Установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- Нажимайте повторно на пульт дистанционного управления кнопку SEARCH MODE до тех пор, пока не появится индикатор фотопоиска. Индикатор будет изменяться следующим образом: DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
- Нажмите кнопку **◀▶** или **▶▶**, чтобы выбрать фото для воспроизведения. Каждый раз при нажатии **◀▶** или **▶▶** видеокамера начинает поиск предыдущего или следующего эпизода. Ваша видеокамера автоматически начнет воспроизведение с этого фото.

Для остановки поиска
Нажмите кнопку **■**.

Searching for a photo – Photo search/Photo scan

Scanning photo

- Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- Press SEARCH MODE on the Remote Commander repeatedly, until the photo scan indicator appears.
The indicator changes as follows:
DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
- Press **◀▶** or **▶▶**.
Each photo is played back for about 5 seconds automatically.



To stop scanning
Press **■**.

Note

The photo search and photo scan work only for tapes recorded in the Digital8 system.

If a tape has a blank portion in the recorded portions
The photo search and photo scan function may not work correctly.

Поиск фото – Фотопоиск/ Фотосканирование

Сканирование фото

- Установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- Нажимайте повторно на пульт дистанционного управления кнопку SEARCH MODE до тех пор, пока не появится индикатор фотосканирования. Индикатор будет изменяться следующим образом: DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
- Нажмите кнопку **◀▶** или **▶▶**.
Каждое фото будет автоматически отображаться примерно 5 секунд.

Для остановки сканирования
Нажмите кнопку **■**.

Примечание

Фотопоиск и фотосканирование функционируют только для лент, записанных в цифровой системе Digital8.

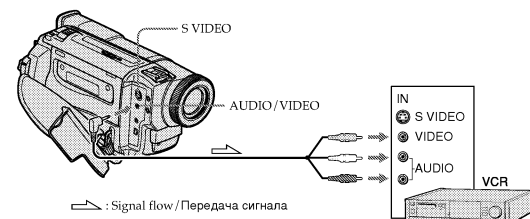
Если на записанной ленте имеются незаписанные участки
Функция фотопоиска и фотосканирования может работать неправильно.

– Editing – Dubbing a tape

Using the A/V connecting cable

Connect your camcorder to the VCR using the A/V connecting cable supplied with your camcorder.

- Insert a blank tape (or a tape you want to record over) into the VCR, and insert the recorded tape into your camcorder.
- Set the input selector on the VCR to LINE. Refer to the operating instructions of your VCR for more information.
- Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- Play back the recorded tape on your camcorder.
- Start recording on the VCR.
Refer to the operating instructions of your VCR for more information.



When you have finished dubbing a tape
Press **■** on both your camcorder and the VCR.

– Монтаж – Перезапись ленты

Использование соединительного кабеля аудио/видео

Подсоедините Вашу видеокамеру к KBM с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере.

- Вставьте незаписанную ленту (или ленту, на которую Вы хотите выполнить запись) в KBM и вставьте записанную ленту в Вашу видеокамеру.
- Установите селектор входного на KBM в положение LINE. Более подробные сведения Вы сможете найти в инструкции по эксплуатации Вашего KBM.
- Установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- Начните воспроизведение записанной ленты на Вашей видеокамере.
- Начните запись на Вашем KBM.
Более подробные сведения Вы сможете найти в инструкции по эксплуатации Вашего KBM.

Если Вы закончили перезапись ленты
Нажмите кнопку **■** как на видеокамере, так и на KBM.

Dubbing a tape

If you have displayed the screen indicators on the TV

Make the indicators disappear by pressing SEARCH MODE on the Remote Commander, DISPLAY or DATA CODE so that they will not be superimposed on the edited tape.

You can edit on VCRs that support the following systems:

8 mm, Hi8, Hi8 VHS, S-VHS, S-VHS, Hi8 VHS, S-VHS, S-VHS, Betamax, mini DV, DV or Digital8

If your VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video input jack and the white or the red plug to the audio input jack on the VCR or the TV. When the white plug is connected, the left channel audio is output, and the red plug is connected, the right channel audio is output.

If your VCR has an S video jack

Connect using an S video cable (not supplied) to obtain high-quality pictures. With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable.

Connect an S video cable (not supplied) to the S video jacks of both your camcorder and the VCR.

Перезапись ленты

При отображении экранных индикаторов на экране телевизора

Добейтесь того, чтобы индикаторы исчезли, нажимая кнопку SEARCH MODE на пульте дистанционного управления, кнопку DISPLAY или DATA CODE, так чтобы они не были наложены на монтажную ленту.

Вы можете выполнять монтаж на KBM, которые поддерживают следующие системы:

8 мм, Hi8, Hi8 VHS, S-VHS, S-VHS, Hi8 VHS, S-VHS, S-VHS, Betamax, mini DV, DV или Digital8

Если Ваш KBM монофонического типа

Подсоедините желтый штекер соединительного кабеля аудио/видео к входному видеогнезду, а белый или красный штекер к входному аудиогнезду на KBM или телевизоре. Если подсоединен белый штекер, то выходным сигналом будет звук левого канала, а если подсоединен красный штекер, то выходным сигналом будет звук правого канала.

Если в Вашем KBM имеется гнездо S видео

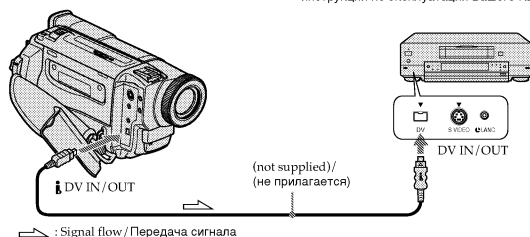
Выполните подсоединение с помощью кабеля S видео (не прилагается) для получения высококачественных изображений. При таком подсоединении Вам не нужно подсоединять желтый (видео) штекер соединительного кабеля аудио/видео. Подсоедините кабель S видео (не прилагается) к гнездам S видео на Вашей видеокамере и KBM.

Dubbing a tape

Using the i.LINK cable (DV connecting cable)

Simply connect the i.LINK cable (DV connecting cable) (not supplied) to DV IN/OUT or DV OUT and to DV IN/OUT of the DV products. With digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing. You cannot dub the screen indicators.

- (1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert the recorded tape into your camcorder.
- (2) Set the input selector on the VCR to DV IN if it is available. Refer to the operating instructions of your VCR for more information.
- (3) Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E).
- (4) Play back the recorded tape on your camcorder.
- (5) Start recording on the VCR. Refer to the operating instructions of your VCR for more information.



When you have finished dubbing a tape

Press ■ on both your camcorder and the VCR.

Перезапись ленты

Использование кабеля i.LINK (соединительного кабеля цифрового видеосигнала DV)

Просто подсоедините кабель i.LINK (соединительный кабель цифрового видеосигнала DV) (не прилагается) к гнезду DV IN/OUT или DV OUT и к гнезду DV IN/OUT цифровых видеоустройств. При цифровом соединении видео- и аудиосигналы передаются в цифровой форме для последующего высококачественного монтажа. Вы не можете выполнить перезапись экранных индикаторов.

- (1) Вставьте незаписанную ленту (или ленту, на которую хотите выполнить запись) в KBM и вставьте записанную ленту в Вашу видеокамеру.
- (2) Установите селектор входного сигнала на KBM в положение DV IN, если оно имеется в наличии. Более подробные сведения приведены в инструкции по эксплуатации Вашего KBM.
- (3) Установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- (4) Начните воспроизведение записанной ленты на Вашей видеокамере.
- (5) Начните запись на KBM. Более подробные сведения приведены в инструкции по эксплуатации Вашего KBM.

Editing
Монтаж

Dubbing a tape

Note on tapes that are not recorded in the Digital8 system

The picture may fluctuate. This is not a malfunction.

During playback of tapes recorded in the Hi8/standard 8 system

Digital signals are output as the image signals from the DV IN/OUT or DV OUT jack.

You can connect one VCR only using the i.LINK cable (DV connecting cable).

See page 138 for more information about i.LINK.

During digital editing

You cannot use PICTURE EFFECT or DIGITAL EFFECT button function.

If you record playback pause picture via the DV IN/OUT or DV OUT jack

The recorded picture becomes rough. Also, when you play back the recorded pictures on other video equipment, the picture may jitter.

Перезапись ленты

Примечание относительно лент, которые были записаны не в цифровой системе Digital8

Возможно подрагивание изображения. Это не является неисправностью.

Во время воспроизведения лент, записанных в системе Hi8/стандартной системе 8

Цифровые сигналы выводятся в качестве сигналов изображения гнезду DV IN/OUT или гнезду DV OUT.

Вы можете подсоединить только один KBM с помощью кабеля i.LINK (соединительного кабеля цифрового видеосигнала DV).

Более подробные сведения относительно i.LINK приведены на стр. 138.

Во время цифрового монтажа

Вы не можете использовать функцию кнопок PICTURE EFFECT или DIGITAL EFFECT.

При записи на паузе воспроизводимого изображения через гнездо DV IN/OUT или гнездо DV OUT

Записанное изображение будет искаженным. Также, при воспроизведении записанных изображений на другой видеоаппаратуре, изображение может подрагивать.

Using with analog video unit and PC – Signal convert function

– DCR-TRV620E only

You can capture images and sound from an analog video unit connected to a PC which has the i.LINK (DV) jack to your camcorder.

Analog video signals → Digital video signals

- (1) Set the POWER switch to VTR.
- (2) Set A/V → DV OUT to ON in the menu settings. (P. 85)
- (3) Start playback on the analog video unit.
- (4) Start capturing procedures on your PC. The operation procedures depend on your PC and the software which you use. For details on how to capture images, refer to the instruction manual of the software.

Использование с аналоговым видеоаппаратом и персональным компьютером – Функция преобразования сигналов

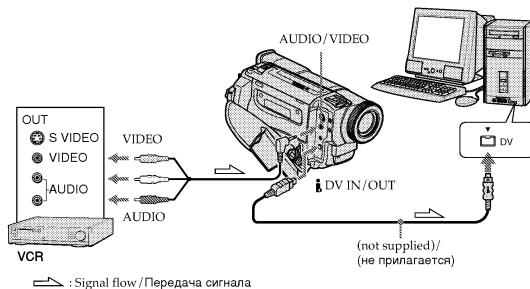
– Только DCR-TRV620E

Вы можете записать изображения и звук от аналогового аппарата, подсоединенного к персональному компьютеру, в котором имеется гнездо i.LINK (DV) для Вашей видеокамеры.

Аналоговые сигналы → Цифровые видеосигналы

- (1) Установите переключатель POWER в положение VTR.
- (2) Установите опцию A/V → DV OUT в положение ON в установках меню (стр. 85).
- (3) Начните воспроизведение на аналоговом видеоаппарате.
- (4) Начните процедуру записи на Вашем персональном компьютере. Эти процедуры зависят от Вашего персонального компьютера и программного обеспечения, которое Вы используете. Подробные сведения о записи изображений приведены в руководстве по использованию программного обеспечения.

Editing
Монтаж



Using with analog video unit and PC – Signal convert function

After capturing images and sound

Stop capturing procedures on your PC, and stop the playback on the analog video unit.

Notes

- You need to install software which can exchange video signals.
- Depending on the condition of the analog video signals, the PC may not be able to output the images correctly when you convert analog video signals into digital video signals via your camcorder.
- Depending on the analog video unit, the image may contain noise or incorrect colours.
- You cannot record or capture the video output via your camcorder when the video includes copyright protection signals such as ID-2 system.

Использование с аналоговым видеоаппаратом и персональным компьютером – Функция преобразования сигналов

После записи изображений и звука

Остановите процедуру записи на Вашем персональном компьютере и остановите воспроизведение на аналоговом видеоаппарате.

Примечания

- Вам нужно установить программное обеспечение, позволяющее выполнять обмен видеосигналов.
- В зависимости от состояния аналоговых видеосигналов, персональный компьютер может не передавать изображения надлежащим образом при преобразовании аналоговых видеосигналов в цифровые видеосигналы с помощью Вашей видеокамеры.
- В зависимости от аналогового видеоаппарата, изображение может содержать помехи или искаженные цвета.
- Вы не можете выполнить запись или съемку выходных видеосигналов с помощью Вашей видеокамеры, если видеосигнал содержит сигналы защиты авторских прав, такие, как систему ID-2.

Recording video or TV programmes

– DCR-TRV620E only

Using the A/V connecting cable

- You can record a tape from another VCR or a TV programme from a TV that has video/audio outputs. Use your camcorder as a recorder.
- (1) Insert a blank tape (or a tape you want to record over) into your camcorder. If you are recording a tape from the VCR, insert a recorded tape into the VCR.
 - (2) Set the POWER switch to VTR.
 - (3) Set DISPLAY to LCD in the menu settings (p. 85).
 - (4) Press **●** REC and the button on its right simultaneously on your camcorder, then immediately press **II** on your camcorder.
 - (5) Press **▶** on the VCR to start playback if you are recording a tape from VCR. Select a TV programme if you are recording from TV. The picture from a TV or VCR appears on the LCD screen or in the viewfinder.
 - (6) Press **II** on your camcorder at the scene where you want to start recording from.

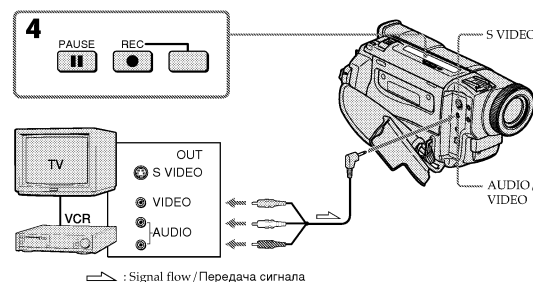
Запись видео или телевизионных программ

– Только DCR-TRV620E

Использование соединительного кабеля аудио/видео

Вы можете записать ленту с другого KBM или телевизионной программы с телевизора, в котором имеются выходы видео/аудио. Используйте Вашу видеокамеру в качестве магнитофона.

- (1) Вставьте незаписанную ленту (или ленту, на которую Вы хотите выполнить перезапись) в Вашу видеокамеру. Если Вы записываете ленту с KBM, вставьте записанную ленту в KBM.
- (2) Установите переключатель POWER в положение VTR.
- (3) Установите опцию DISPLAY в положение LCD в установках меню (стр. 85).
- (4) Нажмите кнопку **●** REC и кнопку справа от нее одновременно на Вашей видеокамере, а затем тотчас же нажмите кнопку **II** на Вашей видеокамере.
- (5) Нажмите кнопку **▶** на KBM для начала воспроизведения, если Вы записываете ленту с KBM. Выберите телевизионную программу с телевизора. Изображение от телевизора или KBM появится на экране ЖКД или в видоискателе.
- (6) Нажмите кнопку **II** на Вашей видеокамере в том месте, где Вы хотите начать запись.



When you have finished dubbing a tape

Press **II** on both your camcorder and the VCR.

Если Вы закончили перезапись на ленту

Нажмите кнопку **II** на видеокамере и на KBM.

78

79

Recording video or TV programmes

Notes

- To enable smooth transition, we recommend that you do not mix pictures recorded in the Hi8/standard 8 with the Digital8 system on a tape.
- If you fast-forward or slow-playback on the other equipment, the image being recorded may fluctuate. When recording from other equipment, be sure to play back the original tape at normal speed.

If your VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video output jack and the white or the red plug to the audio output jack on the VCR or the TV. When the white plug is connected, the left channel audio is output, and the red plug is connected, the right channel audio is output.

If your TV or VCR has an S video jack

Connect using an S video cable (not supplied) to obtain high-quality pictures.

With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable.

Connect an S video cable (not supplied) to the S video jacks of both your camcorder and the TV or VCR.

Запись видео или телевизионных программ

Примечания

- Для обеспечения плавного перехода рекомендуется не смешивать изображения, записанные в системе Hi8/стандартной системе 8 с цифровой системой Digital8 на ленту.
- В случае ускоренного или замедленного воспроизведения на другом аппарате записанное изображение может подрагивать. При записи с другого аппарата Вам следует воспроизводить оригинальную запись на нормальной скорости.

Если Ваш KBM монофонического типа

Подсоедините желтый штекер соединительного кабеля аудио/видео к выходному видеогнезду, а белый или красный штекер к выходному аудиогнезду на KBM или телевизоре. Если подсоединен белый штекер, то выходной сигнал будет передаваться через левый канал, а если подсоединен красный штекер, то выходной сигнал будет передаваться через правый канал.

Если в Вашем телевизоре или KBM имеется гнездо S видео

Выполните подсоединение с помощью кабеля S видео (не прилагается) для получения высококачественных изображений. При данном подсоединении Вам не нужно подсоединять желтый (видео) штекер соединительного кабеля аудио/видео. Подсоедините кабель S видео (не прилагается) к гнездам S видео на видеокамере телевизоре или KBM.

Recording video or TV programmes

– DCR-TRV620E only

Using the i.LINK cable (DV connecting cable)

Simply connect the i.LINK cable (DV connecting cable) (not supplied) to DV IN/OUT and to DV IN/OUT of the DV products. With digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing.

- (1) Insert a blank tape (or a tape you want to record over) into your camcorder, and insert the recorded tape into the VCR.
- (2) Set the POWER switch to VTR.
- (3) Set DISPLAY to LCD in the menu settings (p. 85).
- (4) Press **●** REC and the button on its right simultaneously on your camcorder, then immediately press **II** on your camcorder.
- (5) Press **▶** on the VCR to start playback. The picture from a TV or VCR appears on the LCD screen or in the viewfinder.
- (6) Press **II** on your camcorder at the scene where you want to start recording from.

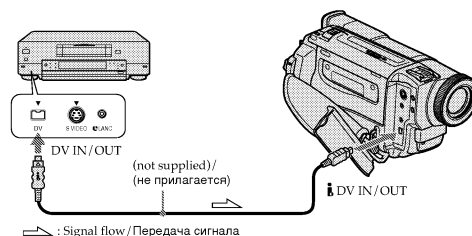
Запись видео или телевизионных программ

– Только DCR-TRV620E

Использование кабеля i.LINK (соединительного кабеля цифрового видеосигнала DV)

Просто подсоедините кабель i.LINK (соединительный кабель цифрового видеосигнала DV) (не прилагается) к гнезду DV IN/OUT или DV OUT и к гнезду DV IN/OUT цифровых видеозаписей. При цифровом подсоединении видео- и аудиосигналы передаются в цифровой форме для высококачественного монтажа.

- (1) Вставьте незаписанную ленту (или ленту, на которую Вы хотите выполнить перезапись) в Вашу видеокамеру и вставьте ленту для записи в KBM.
- (2) Установите переключатель POWER в положение VTR.
- (3) Установите опцию DISPLAY в положение LCD в установках меню (стр. 85).
- (4) Нажмите кнопку **●** REC и кнопку справа от нее одновременно на Вашей видеокамере, а затем тотчас же нажмите кнопку **II** на Вашей видеокамере.
- (5) Нажмите кнопку **▶** на KBM для начала воспроизведения. Изображение от телевизора или KBM появится на экране ЖКД или в видоискателе.
- (6) Нажмите кнопку **II** на Вашей видеокамере в том месте, где Вы хотите начать запись.



When you have finished dubbing a tape

Press **II** on both your camcorder and the VCR.

Если Вы закончили перезапись на ленту

Нажмите кнопку **II** на видеокамере и на KBM.

80

81

Recording video or TV programmes

You can connect one VCR only using the i.LINK cable (DV connecting cable).

During digital editing

The colour of the display may be uneven. However this does not affect the dubbed picture.

If you record playback pause picture with the DV IN/OUT jack

The recorded picture becomes rough. And when you play back the picture using your camcorder, the picture may jitter.

Before recording

Make sure if the DV IN indicator appears on the LCD screen or in the viewfinder by pressing DISPLAY. The DV IN indicator may appear on both equipment.

Запись видео или телевизионных программ

Вы можете подсоединить один KBM только с помощью кабеля i.LINK (соединительный кабель DV).

Во время цифрового монтажа

Цвет дисплея может быть неравномерным. Однако это не влияет на перезаписываемое изображение.

При записи изображения в режиме паузы воспроизведения через гнездо DV IN/OUT

Записанное изображение станет искаженным. А если Вы воспроизведете изображение с помощью Вашей видеокамеры, изображение может подрагивать.

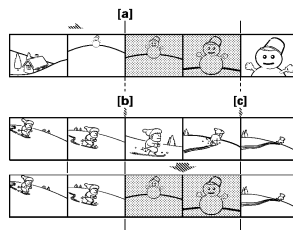
Перед записью

Убедитесь, что индикатор DV IN появился на экране ЖКД или в видоискателе при нажатии кнопки DISPLAY. Индикатор DV IN может появиться на обоих аппаратах.

Inserting a scene from a VCR – Insert Editing

– DCR-TRV620E only

You can insert a new scene from a VCR onto your originally recorded tape by specifying the insert start and end points. Use the Remote Commander for this operation. Connections are the same as in "Recording video or TV programmes" on page 79, 81. Insert a cassette containing the desired scene to insert into the VCR.



Вставка эпизода с KBM – Монтаж вставок

– Только DCR-TRV620E

Вы можете вставить новый эпизод с KBM на Вашу первоначально записанную ленту, указав точки начала и конца вставок. Для этой операции используйте пульт дистанционного управления. Подсоединения являются такими же, как и в разделе "Запись видео или телевизионных программ" на стр. 79, 81. Вставьте кассету, на которой содержится нужный эпизод для вставки в KBM.

Editing Монтаж

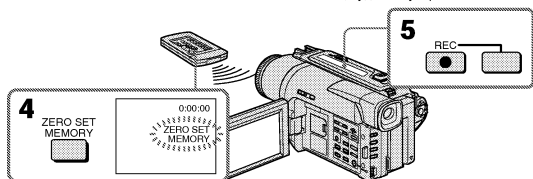
82

Inserting a scene from a VCR – Insert Editing

- (1) Set the POWER switch to VTR.
- (2) On the VCR, locate just before the insert start point [a], then press II to set the VCR to the playback pause mode.
- (3) On your camcorder, locate the insert end point [c] by pressing ◀ or ▶. Then press II to set it to the playback pause mode.
- (4) Press ZERO SET MEMORY on the Remote Commander. The ZERO SET MEMORY indicator flashes and the end point of the insert is stored in memory.
- (5) On your camcorder, locate the insert start point [b] by pressing ◀, then press ● REC and the button on its right simultaneously to set your camcorder to the recording pause mode.
- (6) First press II on the VCR, and after a few seconds press II on your camcorder to start inserting the new scene. Inserting automatically stops near the zero point on the counter. Your camcorder automatically stops. The end point [c] of the insert stored in memory is canceled.

Вставка эпизода с KBM – Монтаж вставок

- (1) Установите переключатель POWER в положение VTR.
- (2) На KBM, найдите место как раз перед точкой начала вставки [a], затем нажмите кнопку II для установки KBM в режим паузы воспроизведения.
- (3) На Вашей видеокамере, найдите точку конца вставки [c], нажав кнопку ◀ или ▶. Затем нажмите кнопку II для установки видеокамеры в режим паузы воспроизведения.
- (4) Нажмите кнопку ZERO SET MEMORY на пульт дистанционного управления. Индикатор ZERO SET MEMORY, а точка конца вставки будет сохранена в памяти.
- (5) На Вашей видеокамере, найдите точку начала вставки [b], нажав кнопку ● REC и кнопку справа для установки Вашей видеокамеры в режим паузы записи.
- (6) Сначала нажмите кнопку II на KBM, а через несколько секунд нажмите кнопку II на Вашей видеокамере для начала вставки нового эпизода. Вставка автоматически остановится возле нулевой точки на счетчике. Ваша видеокамера автоматически остановится. Точка конца вставки [c], сохраненная в памяти, будет аннулирована.



To change the insert end point

Press ZERO SET MEMORY again after step 5 to erase the ZERO SET MEMORY indicator and begin from step 3.

Notes

- The zero set memory function works only for tapes recorded in the Digital8 system.
- The picture and sound recorded on the section between the insert start and end points will be erased when you insert the new scene.

When the inserted picture is played back
The picture may be distorted at the end of the inserted section. This is not a malfunction.

To insert a scene without setting the insert end point

Skip step 3 and 4. Press II when you want to stop inserting.

Для изменения точки конца вставки

Нажмите кнопку ZERO SET MEMORY еще раз после пункта 5 для удаления индикатора ZERO SET MEMORY и начните с действия пункта 3.

Примечания

- Функция памяти установки нуля работает только для лент, записанных в цифровой системе Digital8.
- Изображение и звук, записанные на участке между точками начала и конца вставки, будут стерты, если Вы вставите новый эпизод.

При воспроизведение вставленного изображения
Изображение может быть искажено в конце вставленного участка. Это не является неисправностью.

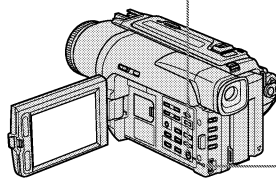
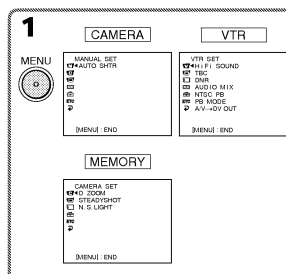
Для вставки эпизода без установки точки конца вставки

Пропустите пункт 3 и 4. Нажмите кнопку II, если Вы хотите остановить вставку.

– Customizing Your Camcorder – Changing the menu settings

- To change the mode settings in the menu settings, select the menu items with the SEL / PUSH EXEC dial. The default settings can be partially changed. First, select the icon, then the menu item and then the mode.
- (1) In CAMERA, VTR (DCR-TRV620E), PLAYER (DCR-TRV420E / TRV520E) or MEMORY mode, press MENU.
 - (2) Turn the SEL / PUSH EXEC dial to select the desired icon, then press the dial to set.
 - (3) Turn the SEL / PUSH EXEC dial to select the desired item, then press the dial to set.
 - (4) Turn the SEL / PUSH EXEC dial to select the desired mode, and press the dial to set.
 - (5) If you want to change other items, select RETURN and press the dial, then repeat steps from 2 to 4.

For details, see "Selecting the mode setting of each item" (p. 86).



– Выполнение индивидуальных установок на видеокамере – Изменение установок меню

- Для изменения установок режима в установках меню выберите пункты меню с помощью диска SEL/PUSH EXEC. Установки по умолчанию можно частично изменить. Сначала выберите пиктограмму, затем пункт меню, а затем режим.
- (1) В режиме CAMERA, VTR (DCR-TRV620E), PLAYER (DCR-TRV420E/TRV520E) или MEMORY нажмите кнопку MENU.
 - (2) Поверните диск SEL/PUSH EXEC для выбора нужной пиктограммы, а затем нажмите диск для выполнения установки.
 - (3) Поверните диск SEL/PUSH EXEC для выбора нужной пиктограммы, а затем нажмите диск для выполнения установки.
 - (4) Поверните диск SEL/PUSH EXEC для выбора нужной пиктограммы, а затем нажмите диск для выполнения установки.
 - (5) Если Вы хотите изменить другие пункты, выберите команду RETURN, а затем нажмите диск, после чего повторите действия пунктов 2-4.

Подробные сведения приведены в разделе "Выбор установок режима по каждому пункту" (стр. 82).

Customizing Your Camcorder Выполнение индивидуальных установок на видеокамере

85

Changing the menu settings

To make the menu display disappear
Press MENU.

Menu items are displayed as the following icons:

- MANUAL SET
- CAMERA SET
- VTR SET (DCR-TRV620E)
- PLAYER SET (DCR-TRV420E/TRV520E)
- LCD / VF SET
- MEMORY SET
- TAPE SET
- SETUP MENU
- OTHERS

English

Selecting the mode setting of each item ● is the default setting.

Menu items differ according to the position of the POWER switch.
The LCD screen and the viewfinder show only the items you can operate at the moment.

| Icon/item | Mode | Meaning | POWER switch |
|------------|-------|---|---------------|
| AUTO SHTR | ● ON | To automatically activate the electronic shutter when shooting in bright conditions | CAMERA |
| | OFF | To not automatically activate the electronic shutter even when shooting in bright conditions | |
| D ZOOM | ● OFF | To deactivate digital zoom. Up to 25× zoom is carried out. | CAMERA MEMORY |
| | 50× | To activate digital zoom. More than 25× to 50× zoom is performed digitally. (p. 24) | |
| | 100×* | To activate digital zoom. More than 25× to 100× zoom is performed digitally. (p. 24) | |
| 16:9WIDE | ● OFF | — | CAMERA |
| | ON | To record a 16:9 wide picture (p. 45) | |
| STEADYSHOT | ● ON | To compensate for camera-shake | CAMERA MEMORY |
| | OFF | To cancel the SteadyShot function. Natural pictures are produced when shooting a stationary object with a tripod. | |
| N.S. LIGHT | ● ON | To use the NightShot Light function (p. 28) | CAMERA MEMORY |
| | OFF | To cancel the NightShot Light function | |

* 125× (DCR-TRV420E only)

Notes on the SteadyShot function

- The SteadyShot function will not correct excessive camera-shake.
- Attachment of a conversion lens (not supplied) may influence the SteadyShot function.

If you cancel the SteadyShot function

The SteadyShot off indicator appears. Your camcorder prevents excessive compensation for camera-shake.

86

Изменение установок меню

Для того, чтобы исчезла индикация меню
Нажмите кнопку MENU.

Пункты меню отображаются в виде приведенных ниже пиктограмм:

- MANUAL SET
- CAMERA SET
- VTR SET (модель DCR-TRV620E)
- PLAYER SET (модель DCR-TRV420E/520E)
- LCD/VF SET
- MEMORY SET
- TAPE SET
- SETUP MENU
- OTHERS

Changing the menu settings

| Icon/item | Mode | Meaning | POWER switch |
|--|--------------|--|--------------|
| HIFI SOUND | ● STEREO | To play back a stereo tape or dual sound track tape with main and sub sound | VTR/PLAYER |
| | 1 | To play back a stereo tape with the left sound or a dual sound track tape with main sound | |
| | 2 | To play back a stereo tape with the right sound or a dual sound track tape with sub sound | |
| TBC* | ● ON | To correct jitter | VTR/PLAYER |
| | OFF | To not correct jitter Set TBC to OFF when playing back a tape on which you have dubbed over and recorded the signal of a TV game or similar machine. | |
| TBC stands for "Time Base Corrector". | | | |
| DNR* | ● ON | To reduce picture noise | VTR/PLAYER |
| | OFF | To reduce a conspicuous afterimage when the picture has a lot of movement | |
| DNR stands for "Digital Noise Reduction". | | | |
| AUDIO MIX | — | To adjust the balance between the stereo 1 and stereo 2 | VTR/PLAYER |
| <div><div></div><div>ST1</div><div>▲</div><div>ST2</div></div> | | | |
| NTSC PB | ● ON PAL TV | To playback a tape recorded on your camcorder on a PAL system TV | VTR/PLAYER |
| | NTSC 4.43 | To playback a tape recorded in the NTSC colour system on a TV with the NTSC 4.43 mode | |
| PB MODE | ● AUTO | To automatically select the system (Hi8/standard 8 or Digital8) that was used to record on the tape, and play back the tape | VTR/PLAYER |
| | Hi8/8 | To play back a tape that was recorded in the Hi8/standard 8 system when your camcorder does not automatically distinguish the recording system | |
| A/V → DV OUT (DCR-TRV620E only) | ● OFF | To convert digital video signals into analog video signals via your camcorder | VTR |
| | ON | To convert analog video signals into digital video signals via your camcorder "A/V → DV" appears on the LCD screen or in the viewfinder. (p. 77) | |

* When you play back tapes recorded in the Hi8/standard 8 system only.

Notes on AUDIO MIX

- When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance.
- You can adjust the balance only for tapes recorded in the Digital8 system.

Note on NTSC PB

When you play back a tape on a Multi System TV, select the best mode while viewing the picture on the TV.

Note on PB MODE

The mode will return to the default setting when:

- you remove the battery pack or power source.
- you turn the POWER switch.

Customizing Your Camcorder
Выполнение индивидуальных установок на видеокамере

87

Changing the menu settings

| Icon/item | Mode | Meaning | POWER switch |
|------------|--------------|--|--------------------------|
| LCD B. L. | ● BRT NORMAL | To set the brightness on the LCD screen normal | VTR/PLAYER CAMERA |
| | BRIGHT | To brighten the LCD screen | |
| LCD COLOUR | — | To adjust the colour on the LCD screen, turning the SEL/PUSH EXEC dial to adjust the following bar | VTR/PLAYER CAMERA MEMORY |
| | | | |
| VF B.L. | ● BRT NORMAL | To set the brightness in the viewfinder normal | VTR/PLAYER CAMERA MEMORY |
| | BRIGHT | To brighten the viewfinder | |
| CONTINUOUS | ● OFF | Not to record continuously | MEMORY |
| | MULTI SCR.N | To record 9 images continuously (p. 107) | |
| QUALITY | ● FINE | To record still images in the fine image quality mode, using the "Memory Stick" | VTR/PLAYER MEMORY |
| | STANDARD | To record still images in the standard image quality mode, using the "Memory Stick" | |
| FLD./FRAME | ● FIELD | To record moving subjects | MEMORY |
| | FRAME | To record stopping subjects in high quality | |
| PRINT MARK | ● OFF | To cancel print marks on still images | VTR/PLAYER MEMORY |
| | ON | To write a print mark on the recorded still images you want to print out later | |
| PROTECT | ● OFF | Not to protect still images | VTR/PLAYER MEMORY |
| SLIDE SHOW | — | To play back images in a continuous loop (p. 126) | MEMORY |
| | DELETE ALL | To delete all the images (p. 131) | |
| FORMAT | ● RETURN | To cancel formatting | VTR/PLAYER MEMORY |
| | FORMAT | To format an inserted "Memory Stick" 1. Select FORMAT with the SEL/PUSH EXEC dial, then press the dial. 2. Turn the SEL/PUSH EXEC dial to select FORMAT, then press the dial. 3. After EXECUTE appears, press the SEL/PUSH EXEC dial. FORMATTING appears during formatting. COMPLETE appears when formatting is finished. | |
| PHOTO SAVE | — | To duplicate still images (p. 117) | VTR/PLAYER |

Notes on LCD B.L. and VF B.L.

- When you select BRIGHT, battery life is reduced by about 10 percent during recording.
- When you use power sources other than the battery pack, BRIGHT is automatically selected.

Notes on formatting

- Supplied or optional "Memory Stick"s have been formatted at factory. Formatting with this camcorder is not required.
- Do not turn the POWER switch or press any button while the display shows FORMATTING.
- You cannot format the "Memory Stick" if the write-protect tab on the "Memory Stick" is set to LOCK.
- Format again if the message appears.

Formatting erases all information on the "Memory Stick"

- Check the contents of the "Memory Stick" before formatting.
- Formatting erases sample images on the "Memory Stick."
- Formatting erases the protected image data on the "Memory Stick."

88

Changing the menu settings

| Icon/item | Mode | Meaning | POWER switch |
|------------|------------|---|--|
| REC MODE | ● SP | To record in the SP (Standard Play) mode | VTR/PLAYER CAMERA |
| | LP | To increase the recording time to 1.5 times the SP mode | |
| AUDIO MODE | ● 12BIT | To record or play back in the 12-bit mode (two stereo sounds) | VTR/PLAYER* CAMERA |
| | 16BIT | To record or play back in the 16-bit mode (the one stereo sound with high quality) | |
| REMAIN | ● AUTO | To display the remaining tape bar: <ul style="list-style-type: none">for about 8 seconds after your camcorder is turned on and calculates the remaining amount of tapefor about 8 seconds after a cassette is inserted and your camcorder calculates the remaining amount of tapefor about 8 seconds after is pressed in VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E) modefor about 8 seconds after DISPLAY is pressed to display the screen indicatorsfor the period of tape rewinding, forwarding or picture search in the VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E) mode | VTR/PLAYER CAMERA |
| | ON | To always display the remaining tape bar | |
| | ● DATE/CAM | To display date, time and recording data during playback | |
| | | DATE | To display date and time during playback |

Note on REC MODE

When you record on the standard 8 tape, your camcorder records in the SP mode even you select the LP mode in the menu settings. In this case, the indicator "8 mm TAPE → SP REC, Hi8 TAPE → LP/SP REC" appears on the LCD screen or in the viewfinder. Use the Hi8 tapes for the LP mode.

Notes on the LP mode

- When you record a tape in the LP mode on your camcorder, we recommend playing the tape on your camcorder. When you play back the tape on other camcorders or VCRs, noise may occur in images or sound.
- When you record in the SP and LP modes on one tape or you record some scenes in the LP mode, the playback image may be distorted or the time code may not be written properly between scenes.

Note on AUDIO MODE

When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance in AUDIO MIX.

*To dub a tape to another VCR

You cannot select AUDIO MODE for tapes recorded in the Digital8 system. You, however, can select AUDIO MODE when you dub tapes recorded in the Hi8/standard 8 system to another VCR using the i.LINK cable.

Customizing Your Camcorder
Выполнение индивидуальных установок на видеокамере

89

Changing the menu settings

| Icon/item | Mode | Meaning | POWER switch |
|-----------|----------------|--|-----------------------------|
| CLOCK SET | — | To reset the date or time (p. 98) | CAMERA MEMORY |
| LTR SIZE | ● NORMAL 2x | To display selected menu items in normal size To display selected menu items at twice the normal size | VTR/PLAYER CAMERA MEMORY |
| DEMO MODE | ● ON OFF | To make the demonstration appear To cancel the demonstration mode | CAMERA |

Notes on DEMO MODE

- You cannot select DEMO MODE when a cassette is inserted in your camcorder.
- DEMO MODE is set to STBY (Standby) at the factory and the demonstration starts about 10 minutes after you have set the POWER switch to CAMERA without a cassette inserted. To cancel the demonstration, insert a cassette, set the POWER switch to other than CAMERA, or set DEMO MODE to OFF.
- When NIGHTSHOT is set to ON, the "NIGHTSHOT" indicator appears on the LCD screen or in the viewfinder and you cannot select DEMO MODE in the menu settings.

Changing the menu settings

| Icon/item | Mode | Meaning | POWER switch |
|------------|---------------------------|---|-----------------------------|
| WORLD TIME | — | To set the clock to the local time. Turn the SEL/PUSH EXEC dial to set a time difference. The clock changes by the time difference you set here. If you set the time difference to 0, the clock returns to the originally set time. | CAMERA MEMORY |
| BEEP | ● MELODY NORMAL OFF | To output the melody when you start/stop recording or when an unusual condition occurs on your camcorder To output the beep instead of the melody To cancel all sound including shutter sound | VTR/PLAYER CAMERA MEMORY |
| COMMANDER | ● ON OFF | To activate the Remote Commander supplied with your camcorder To deactivate the Remote Commander to avoid remote control misoperation caused by other VCR's remote control | VTR/PLAYER CAMERA MEMORY |
| DISPLAY | ● LCD V-OUT/LCD | To show the display on the LCD screen and in the viewfinder To show the display on the TV screen, LCD screen and in the viewfinder | VTR/PLAYER CAMERA MEMORY |
| REC LAMP | ● ON OFF | To light up the camera recording lamp at the front of your camcorder To turn the camera recording lamp off so that the subject is not aware of the recording | CAMERA MEMORY |
| INDICATOR | ● BL OFF BL ON | To turn off the backlight on display window To turn on the backlight | VTR/PLAYER CAMERA MEMORY |

Note

If you press DISPLAY with DISPLAY set to V-OUT/LCD in the menu settings, the picture from a TV or VCR will not appear on the LCD screen even when your camcorder is connected to outputs on the TV or VCR. (Except when your camcorder is connected with the i.LINK cable.)

In more than 5 minutes after removing the power source

The AUDIO MIX, COMMANDER and HiFi SOUND items are returned to their default settings. The other menu items are held in memory even when the battery is removed, as long as the lithium battery is installed.

Notes on INDICATOR

- When you select BL ON, battery life is reduced by about 10 percent during recording.
- When you use power sources other than the battery pack, BL ON is automatically selected.

Resetting the date and time

The default clock setting is set to London time for United Kingdom and to Paris time for the other European countries Time.

The date and time are held in memory by the lithium battery. If you replace the lithium battery with the battery pack or other power source connected, you need not reset the date and time. You must reset the date and time when the lithium battery becomes dead with no power source installed.

First, set the year, then the month, the day, the hour and then the minute.

- While the camcorder is in the standby mode, press MENU to display the menu settings.
- Turn the SEL/PUSH EXEC dial to select , then press the dial.
- Turn the SEL/PUSH EXEC dial to select CLOCK SET, then press the dial.
- Turn the SEL/PUSH EXEC dial to adjust the desired year, then press the dial.
- Set the month, day and hour by turning the SEL/PUSH EXEC dial and pressing the dial.
- Set the minute by turning the SEL/PUSH EXEC dial and pressing the dial by the time signal. The clock starts to move.
- Press MENU to make the menu settings disappear.

Переустановка даты и времени

Установка часов по умолчанию соответствует времени Лондона для моделей Соединенного Королевства и времени Парижа для других европейских моделей. Дата и время сохраняются в памяти с помощью литиевой батарейки. Если Вы от литиевой батарейки переключитесь на батарейный блок или другой подсоединенный источник питания, Вам нужно будет переустановить дату и время. Вам нужно также переустановить дату и время, когда литиевая батарейка разрядится и в это время не будет вставлен источник питания. Сначала установите год, затем месяц, день, час и минуту.

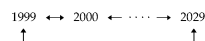
- В режиме ожидания видеокамеры нажмите кнопку MENU для отображения установок меню.
- Поверните диск SEL/PUSH EXEC для выбора индикации , а затем нажмите диск.
- Поверните диск SEL/PUSH EXEC для выбора команды CLOCK SET, а затем нажмите диск.
- Поверните диск SEL/PUSH EXEC для выбора нужного года, а затем нажмите диск.
- Установите месяц, день и час путем вращения диска SEL/PUSH EXEC и нажатия диска.
- Установите минуты путем вращения диска SEL/PUSH EXEC и нажатия диска в момент передачи сигнала точного времени. Часы начнут функционировать.
- Нажмите кнопку MENU для того, чтобы исчезли установок меню.

Resetting the date and time

The year changes as follows:

Переустановка даты и времени

Год изменяется следующим образом:



If you do not set the date and time

"- - - - -" "- - - - -" is recorded on the tape and the "Memory Stick".

Note on the time indicator

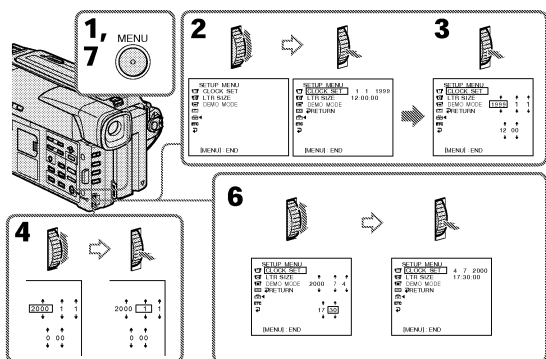
The internal clock of your camcorder operates on a 24-hour cycle.

Если Вы не установили дату и время

На ленту и "Memory Stick" будет записываться индикация "- - - - -" "- - - - -".

Примечание по индикатору времени

Встроенные часы Вашей видеокамеры работают в 24-часовом режиме.



— "Memory Stick" operations —

Using "Memory Stick"—introduction

You can record and play back still images on the "Memory Stick" supplied with your camcorder. You can easily play back, record or delete still images. You can exchange image data with other equipment such as a personal computer etc., using the serial port adaptor for "Memory Stick" (not supplied) or PC card adaptor for "Memory Stick" (not supplied).

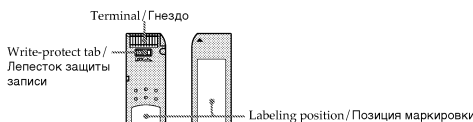
On file format (JPEG)

Your camcorder compresses image data in JPEG format (extension .jpg).

Typical image data file name

100-0001: This file name appears on the LCD screen or in the viewfinder of your camcorder.
Dsc00001.jpg: This file name appears on the display of your personal computer.

Before using "Memory Stick"



- You cannot record or erase still images when the write-protect tab on the "Memory Stick" is set to LOCK.
- We recommend backing up important data.
- Image data may be damaged in the following cases:
 - If you remove the "Memory Stick", turn the power off, or detach the battery for replacement when the access lamp is flashing.
 - If you use "Memory Stick"s near static electricity or magnetic fields.
- Prevent metallic objects or your finger from coming into contact with the metal parts of the connecting section.
- Stick its label on the labeling position.
- Do not bend, drop or apply strong shock to "Memory Stick"s.
- Do not disassemble or modify "Memory Stick"s.

100

— Операции с "Memory Stick" —

Использование "Memory Stick"—Введение

Вы можете записывать и воспроизводить неподвижные изображения на "Memory Stick", прилагаемой к Вашей видеокамере. Вы можете легко выполнять воспроизведение, перезапись или удаление неподвижных изображений. Вы можете выполнять обмен данных изображения с другой аппаратурой, такой как персональный компьютер и т.п., используя адаптер последовательного порта для "Memory Stick" (не прилагается), или адаптер PC-карты для "Memory Stick" (не прилагается).

О формате файлов (JPEG)

Ваша видеокамера сжимает данные изображения в формат JPEG (с расширением .jpg).

Типичное имя файла данных изображений

100-0001: Имя этого файла появится на экране ЖКД или в видоскопелате Dsc00001.jpg: Имя этого файла появится на дисплее Вашего персонального компьютера.

Перед использованием "Memory Stick"

- Вы не можете записывать или стирать неподвижные изображения, если лепесток защиты записи на "Memory Stick" установлен в положение LOCK.
- Рекомендуется выполнять копию важных данных.
- Данные изображения могут быть повреждены в следующих случаях:
 - Если Вы вынули "Memory Stick", выключили питание или отсоединили батарейный блок для замены в то время, когда мигает лампочка доступа.
 - Если Вы используете "Memory Stick" возле магнитов или магнитных полей.
- Не прикасайтесь металлическими частями или Вашими пальцами к металлическим частям соединительных секций.
- Наклейте этикетку в позиции маркировки.
- Не сгибайте, не роняйте и сильно не трясите "Memory Stick".
- Не разбирайте и не модифицируйте "Memory Stick".

Using "Memory Stick"—introduction

- Do not let "Memory Stick"s get wet.
- Do not use or keep "Memory Stick"s in locations that are:
 - Extremely hot such as in a car parked in the sun or under the scorching sun
 - Under direct sunlight
 - Very humid or subject to corrosive gases
- When you carry or store a "Memory Stick", put it in its case.

Formatting the supplied "Memory Stick"

Formatting with this camcorder is not required. The "Memory Stick" has been formatted in the FAT-format at factory.

"Memory Stick" supplied with your camcorder

- Sample images are recorded in the "Memory Stick" (p. 113). Note that these images will be deleted if you format the "Memory Stick."
- Stick the supplied label on the labeling position to prevent the accidental erasure. As for the labeling position, see the illustration on the previous page.

"Memory Stick"s formatted by a computer

"Memory Stick"s formatted by Windows OS or Macintosh computers do not have a guaranteed compatibility with this camcorder.

Notes on image data compatibility

- Image data files recorded on "Memory Stick"s by your camcorder conform with the Design Rules for Camera File Systems universal standard established by the JEIDA (Japan Electronic Industry Development Association). You cannot play back on your camcorder still images recorded on other equipment (DCR-TRV890E/TRV900/TRV900E or DSC-D700/D770) that does not conform with this universal standard. (These models are not sold in some areas.)
- If you cannot use the "Memory Stick" that has been used on other equipment, format the "Memory Stick" on your camcorder following the steps on page 88. Note that all images on the "Memory Stick" will be deleted if you format it.

"Memory Stick" and are trademarks of Sony Corporation.

Использование "Memory Stick"—Введение

- Не допускайте, чтобы "Memory Stick" становились влажными.
- Не используйте и не храните "Memory Stick" в местах:
 - Чрезмерно жарких, например, в припаркованном под солнцем автомобиле или под палящим солнцем.
 - Под прямым солнечным светом
 - В местах очень влажных или содержащих коррозионные газы
- При переноске или хранении "Memory Stick" положите ее в футляр.

Форматирование прилагаемой "Memory Stick"

Форматирование на данной видеокамере не требуется. "Memory Stick" уже отформатирована в формате FAT на предприятии-изготовителе.

"Memory Stick", прилагаемая к Вашей видеокамере

- На "Memory Stick" записаны образцы изображений (стр. 113). Имейте в виду, что эти изображения будут удалены, если Вы отформатируете "Memory Stick".
- Наклейте прилагаемую этикетку в позиции маркировки для предотвращения случайного стирания. Что касается позиции маркировки, см. рисунок на предыдущей странице.

"Memory Stick"s, отформатированная на компьютере

"Memory Stick", отформатированная в операционной системе Windows или Macintosh, может оказаться не совместимой с данной видеокамерой.

Примечания по совместимости данных изображений

- Файлы данных изображений, записанные на "Memory Stick" с помощью данной видеокамеры, отвечают проектным требованиям для универсального стандарта файловых систем видеокамеры, разработанного JEIDA (японской ассоциацией электронной промышленности). Вы не можете воспроизводить на Вашей видеокамере неподвижные изображения, записанные на другой аппаратуре (DCR-TRV890E/TRV900/TRV900E или DCS-D700/D770), которые не соответствуют этому универсальному стандарту. (Эти модели не продаются в некоторых регионах.)
- Если Вы не можете использовать "Memory Stick", которая использовалась на другой аппаратуре, отформатируйте "Memory Stick" на Вашей видеокамере, следуя инструкции на стр. 84. Имейте в виду, что все изображения на "Memory Stick" будут удалены, если Вы отформатируете ее.

"Memory Stick" и являются фирменными знаками Sony Corporation.

"Memory Stick" operations

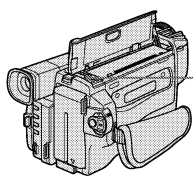
Операции с "Memory Stick"

101

Using "Memory Stick"—introduction

Inserting "Memory Stick"

- (1) Open the lid of the cassette compartment.
- (2) Insert the "Memory Stick" with the ▲ facing toward the "Memory Stick" compartment as illustrated until it clicks.
- (3) Close the lid of the cassette compartment.



To eject the "Memory Stick"

Open the lid of the cassette compartment, then press the "Memory Stick" once lightly. The "Memory Stick" pops up.

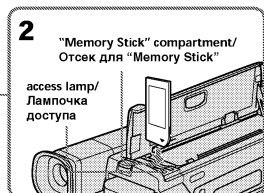
When the access lamp is lit or flashing

Do not shake or strike your camcorder. Do not turn the power off, eject the "Memory Stick" or remove the battery pack. Otherwise, the image data breakdown may occur.

Использование "Memory Stick"—Введение

Установка "Memory Stick"

- (1) Откройте крышку кассетного отсека.
- (2) Вставьте "Memory Stick", так чтобы знак ▲ был обращен в сторону отсека для "Memory Stick", как показано на рисунке, пока не раздастся щелчок.
- (3) Закройте крышку кассетного отсека.



Для извлечения "Memory Stick"

Откройте крышку кассетного отсека, затем слегка нажмите "Memory Stick" один раз. "Memory Stick" выйдет из отсека.

Если лампочка доступа горит или мигает

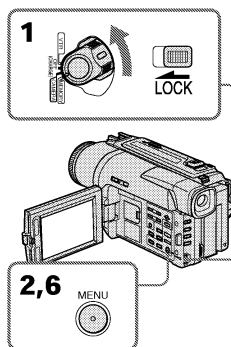
Не трясите и не стучите по Вашей видеокамере. Не выключайте питание, не извлекайте "Memory Stick" из отсека и не снимайте батарейный блок. В противном случае данные изображения могут быть повреждены.

Using "Memory Stick"—introduction

Selecting image quality mode

You can select image quality mode in still image recording. Default setting is FINE.

- (1) Set the POWER switch to VTR (DCR-TRV620E), PLAYER (DCR-TRV420E/TRV520E) or MEMORY. Make sure that the LOCK is set to the right (unlock) position.
- (2) Press MENU to make the menu display appear.
- (3) Turn the SEL/PUSH EXEC dial to select , then press the dial.
- (4) Turn the SEL/PUSH EXEC dial to select QUALITY, then press the dial.
- (5) Turn the SEL/PUSH EXEC dial to select the desired image quality, then press the dial.
- (6) Press MENU to erase the menu display.



Note

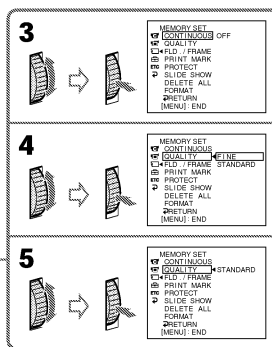
In some cases, changing the image quality mode may not affect the image quality, depending on the types of images you are shooting.

Использование "Memory Stick"—Введение

Выбор режима качества изображения

Вы можете выбрать режим качества изображения при записи неподвижного изображения. Установкой по умолчанию является FINE.

- (1) Установите переключатель POWER в положение VTR (DCR-TRV620E), PLAYER (DCR-TRV420E/TRV520E) или MEMORY. Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Нажмите кнопку MENU, чтобы на дисплее появилась индикация меню.
- (3) Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажмите диск.
- (4) Поверните диск SEL/PUSH EXEC для выбора установки QUALITY, а затем нажмите диск.
- (5) Поверните диск SEL/PUSH EXEC для выбора подходящего качества изображения, а затем нажмите диск.
- (6) Нажмите кнопку MENU для стирания индикации меню.



Примечание

В некоторых случаях, изменение режима качества изображения может отразиться на качестве изображений, в зависимости от типов изображений, которые Вы снимаете.

"Memory Stick" operations

Операции с "Memory Stick"

103

Using "Memory Stick" – introduction

Image quality settings

| Setting | Meaning |
|----------------|--|
| FINE (FINE) | Use this mode when you want to record high quality images. The image is compressed to about 1/6. |
| STANDARD (STD) | This is the standard image quality. The image is compressed to about 1/10. |

Differences in image quality mode

Recorded images are compressed in JPEG format before being stored into memory. The memory capacity allotted to each image varies depending on the selected image quality mode. Details are shown in the table below. (The number of pixels is 640 × 480, regardless of image quality mode. The data size before compression is about 600 KB.)

| Image quality mode | Memory capacity |
|--------------------|-----------------|
| FINE | About 100 KB |
| STANDARD | About 60 KB |

Approximate number of images you can record on a "Memory Stick"

The approximate number of images you can record on a "Memory Stick" formatted using this camcorder varies depending on which image quality mode you select and the complexity of the subject.

Maximum number of images you can record on a "Memory Stick"

| Setting | 4MB | 8MB | 16MB | 32MB | 64MB |
|----------|-----|-----|------|------|------|
| FINE | 40 | 81 | 164 | 329 | 659 |
| STANDARD | 60 | 122 | 246 | 494 | 988 |

Note on the image quality mode indicator

This is only displayed during recording.

Использование "Memory Stick" – Введение

Установки качества изображения

| Установка | Значение |
|----------------|--|
| FINE (FINE) | Используйте этот режим, если Вы хотите записать высококачественные изображения. Изображение сжимается примерно до 1/6. |
| STANDARD (STD) | Это соответствует стандартному качеству изображения. Изображение сжимается примерно до 1/10. |

Отличия в режиме качества изображения
Записанные изображения сжимаются в формат JPEG перед сохранением в памяти. Емкость памяти, выделенная для каждого изображения, изменяется в зависимости от выбранного режима качества изображения. Подробности содержатся в приведенной ниже таблице. (Количество элементов изображения равно 640 × 480, независимо от режима качества изображения. Размер перед сжатием составляет около 600 Кб.)

| Режим качества изображения | Емкость памяти |
|----------------------------|----------------|
| FINE | Около 100 Кб |
| STANDARD | Около 60 Кб |

Приблизительное количество изображений, которое Вы можете записать на "Memory Stick"
Приблизительное количество изображений, которое Вы можете записать на "Memory Stick", отформатированную с помощью данной видеокамеры, изменяется в зависимости от выбранного Вами режима качества изображения и сложности объекта.

Максимальное количество изображений, которое Вы можете записать на "Memory Stick".

| Setting | 4MB | 8MB | 16MB | 32MB | 64MB |
|----------|-----|-----|------|------|------|
| FINE | 40 | 81 | 164 | 329 | 659 |
| STANDARD | 60 | 122 | 246 | 494 | 988 |

Примечание по индикатору режима качества изображения

Этот индикатор отображается только во время записи.

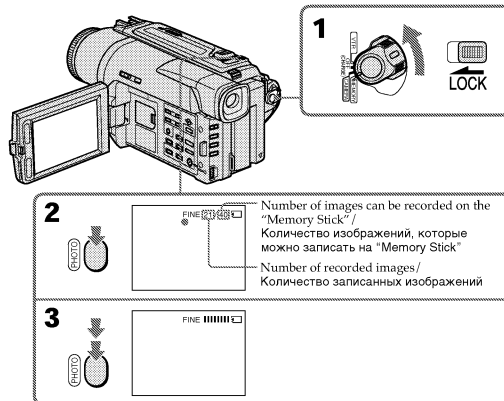
Recording still images on "Memory Stick" – Memory Photo recording

You can select the FIELD or FRAME mode in still image recording. Your camcorder compensates for camera-shake when recording moving subjects in the FIELD mode. Your camcorder records still images in high quality in the FRAME mode. Select the FIELD or FRAME in the menu settings (p. 85).

Before operation

Insert a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to MEMORY. Make sure that the LOCK is set to the right (unlock) position.
- (2) Keep pressing PHOTO lightly. The green mark stops flashing, then lights up. The brightness of the image and focus are adjusted being targeted for the middle of the image and are fixed. Recording does not start yet.
- (3) Press PHOTO deeper. The image displayed on the screen will be recorded on the "Memory Stick". Recording is complete when the bar scroll indicator disappears.



Запись неподвижных изображений на "Memory Stick" – Фотосъемка с сохранением в памяти

Вы можете выбрать режим FIELD или FRAME при записи неподвижных изображений. Ваша видеокамера компенсирует подрагивания при записи движущихся объектов в режиме FIELD. Ваша видеокамера записывает неподвижные изображения с высоким качеством в режиме FRAME. Выберите опцию FIELD или FRAME в установках меню (стр. 85).

Перед началом работы

Вставьте "Memory Stick" в Вашу видеокамеру.

- (1) Установите переключатель POWER в положение MEMORY. Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Держите слегка нажатой кнопку PHOTO. Зеленый знак ● прекратит мигать и будет высвечиваться постоянно. Яркость изображения и фокусное расстояние будут отрегулированы при наводке на середину изображения и будут зафиксированы при этом.
- (3) Нажмите кнопку PHOTO сильнее. Изображение, отображаемое на экране, будет записано на "Memory Stick". Запись считается завершенной, если исчезнет перемещающийся полосатый индикатор.

"Memory Stick" operations
Операции с "Memory Stick"

Recording still images on "Memory Stick" – Memory Photo recording

Notes

- When recording fast-moving subjects in the FRAME mode, the recorded image blurry.
- When recording in the FRAME mode, your camcorder may not correct camera-shake. We recommend that you shoot objects with a tripod.
- When recording still images at step 2 with the PHOTO button pressed lightly, the image momentarily flickers. This is not a malfunction.
- Before you shoot in autofocus mode, check that the subject is in sharp focus.
- The brightness of the picture and focus are adjusted on the center portion of the image.

When the POWER switch is set to MEMORY

The following functions do not work: wide mode, digital effect, picture effect, title, low lux mode of PROGRAM AE.

When you are recording a still image

You can neither turn off the power nor press PHOTO.

When you press the PHOTO button on the Remote Commander

Your camcorder immediately records the image that is on the screen when you press the button.

Recording images continuously

You can record still images continuously.

Multi screen mode

You can record 9 still images continuously on a single page.



Запись неподвижных изображений на "Memory Stick" – Фотосъемка с сохранением в памяти

Примечания

- При записи быстро движущихся объектов в режиме FRAME, изображение будет размытым.
- При записи в режиме FRAME функция компенсации подрагивания Вашей видеокамеры может работать неправильно. Рекомендуется выполнять съемку объектов с помощью штатива.
- Во время записи неподвижных изображений в пункте 2 с нажатой кнопкой PHOTO, изображение будет временно мерцать. Это не является неисправностью.
- Перед съемкой в режиме автоматической фокусировки проверьте, чтобы объект был четко сфокусирован.
- Яркость объекта и фокусное расстояние будут отрегулированы по центру изображения.

Если переключатель POWER установлен в положение MEMORY
Следующие функции не будут работать: Широкоэкранный режим, цифровой эффект, эффект изображения, титр, режим низкой освещенности PROGRAM AE.

Если Вы записываете неподвижное изображение
Вы не можете ни выключить питание, ни нажать кнопку PHOTO.

Если Вы нажмете PHOTO на пульте дистанционного управления
Ваша видеокамера тотчас же запишет изображение, которое будет на экране при нажатии кнопки.


Запись изображений непрерывно

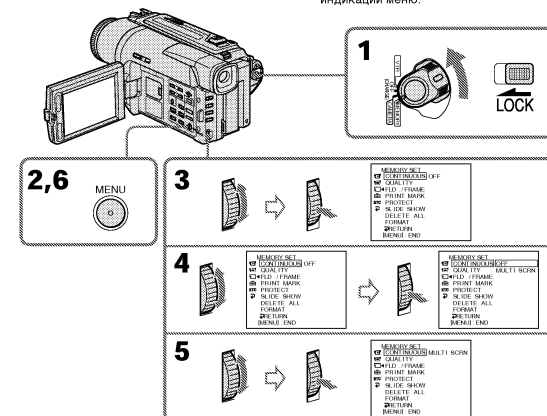
Вы можете записывать неподвижные изображения непрерывно.

Многоэкранный режим

Вы можете записывать 9 неподвижных изображений непрерывно на одной странице.

Recording still images on "Memory Stick" – Memory Photo recording

- (1) Set the POWER switch to MEMORY. Make sure that the LOCK is set to the right (unlock) position.
- (2) Press MENU to make the menu display appear.
- (3) Turn the SEL/PUSH EXEC dial to select , then press the dial.
- (4) Turn the SEL/PUSH EXEC dial to select CONTINUOUS, then press the dial.
- (5) Turn the SEL/PUSH EXEC dial to select the desired setting, then press the dial.
- (6) Press MENU to erase the menu display.



"Memory Stick" operations
Операции с "Memory Stick"

If the capacity of the "Memory Stick" becomes full

"E3 FULL" appears on the LCD screen or in the viewfinder, and you cannot record still images on the "Memory Stick."

Если емкость "Memory Stick" переполнена

На экране или в видоскопелителе появится индикация "E3 FULL", и Вы не сможете записывать неподвижные изображения на эту "Memory Stick".

Recording still images on "Memory Stick" – Memory Photo recording

Continuous shooting settings

| Setting | Meaning (indicator on the screen) |
|------------|--|
| OFF | Your camcorder shoots one image at a time. (no indicator) |
| MULTI SCRN | Your camcorder shoots 9 still images at about 0.5 sec intervals and displays the images on a single page divided into 9 boxes. () |

Note on using the video flash light (not supplied)

The video flash light does not work in the multi screen mode if you install it to the accessory shoe.

Запись неподвижных изображений на "Memory Stick" – Фотосъемка с сохранением в памяти

Установки непрерывной съемки

| Установка | Значение (индикатор на экране) |
|------------|--|
| OFF | Ваша видеокамера снимает одно изображение за раз (без индикатора). |
| MULTI SCRN | Ваша видеокамера снимает 9 неподвижных изображений примерно с 0,5-секундными интервалами и отображает изображения на одной странице, разделенной на 9 прямоугольников. () |

Примечание по использованию видеосъемки (не прилагается)
Видеосъемка не работает в непрерывном или многоэкранном режиме, если Вы установили ее в держатель для вспомогательных принадлежностей.

Recording still images on "Memory Stick" – Memory Photo recording

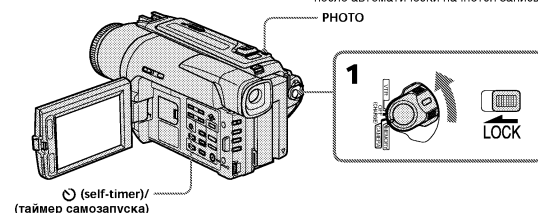
Self-timer memory photo recording

You can record still images on "Memory Stick" with the self-timer. This mode is useful when you want to record yourself.

You can use the Remote Commander for this operation.

- (1) Set the POWER switch to MEMORY. Make sure that the LOCK is set to the right (unlock) position.
- (2) Press (self-timer). The (self-timer) indicator appears on the LCD screen or in the viewfinder.
- (3) Press PHOTO firmly.

Self-timer starts counting down from 10 with a beep sound. In the last two seconds of the countdown, the beep sound gets faster, then recording starts automatically.



To cancel self-timer recording

Press (self-timer) so that the (self-timer) indicator disappears from the LCD or viewfinder screen while your camcorder is in the standby mode. You cannot cancel self-timer recording with the Remote Commander.

Note

The self-timer recording mode is automatically canceled when:
– Self-timer recording is finished.
– The POWER switch is set to OFF (CHARGE), VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E).

Запись неподвижных изображений на "Memory Stick" – Фотосъемка с сохранением в памяти

Фотосъемка в память по таймеру самозапуска

Вы можете записывать неподвижные изображения на "Memory Stick" с помощью таймера самозапуска. Этот режим является полезным, если Вы хотите снять самого себя. Для этой операции Вы можете использовать пульт дистанционного управления.

- (1) Установите переключатель POWER в положение MEMORY. Убедитесь, что переключатель LOCK установлен в правом (незафиксированном) положении.
- (2) Нажмите кнопку (таймер самозапуска). На экране ЖКД или в видоискателе появится индикатор (самозапуска).
- (3) Нажмите кнопку PHOTO сильнее. Таймер самозапуска начнет обратный отсчет от 10 с зуммерным сигналом. В последние две секунды обратного отсчета зуммерный сигнал будет звучать чаще, после автоматически начнется запись.

Для отмены записи по таймеру самозапуска

Нажмите кнопку (таймер самозапуска), так чтобы индикатор () исчез с экрана ЖКД или видоискателя в то время, когда Ваша видеокамера находится в режиме ожидания. С помощью пульта дистанционного управления Вы не можете отменить запись по таймеру самозапуска.

Примечание

Режим записи по таймеру самозапуска будет автоматически отменен, если:
– Запись по таймеру самозапуска закончилась.
– Переключатель POWER установлен в положение OFF (CHARGE), VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/ TRV520E).

Superimposing a still image in the "Memory Stick" on a moving image – MEMORY MIX

You can superimpose a still image you have recorded on the "Memory Stick" on top of the moving image you are recording.

M. CHROM (Memory chroma key)

You can swap a blue area of a still image such as an illustration or a frame with a moving image.

M. LUMI (Memory luminance key)

You can swap a brighter area of a still image such as a handwritten illustration or title with a moving image. Record a title on the "Memory Stick" before a trip or event for convenience.

C. CHROM (Camera chroma key)

You can superimpose a moving image on top of a still image such as an image can be used as background. Shoot the subject against a blue background. The blue area of the moving image will be swapped with a still image.

M. OVERLAP (Memory overlap)

You can make a moving image fade in on top of a still image.

Наложение неподвижного изображения из "Memory Stick" на подвижное изображение – MEMORY MIX

Вы можете наложить неподвижное изображение, записанное на "Memory Stick", на записываемое подвижное изображение.

M. CHROM (кнопка цветности памяти)

Вы можете менять местами синюю часть неподвижного изображения с подвижным изображением.

M. LUMI (кнопка яркости памяти)

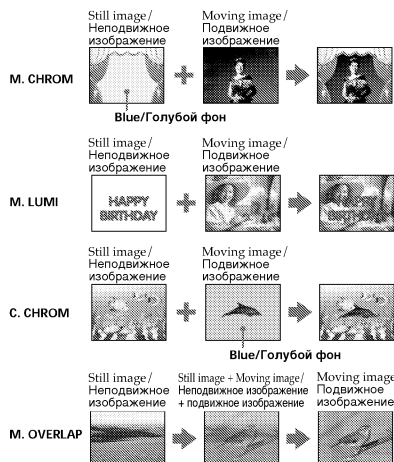
Вы можете менять местами более яркую часть неподвижного изображения с подвижным изображением. Запишите титр на "Memory Stick" перед путешествием или каким-либо событием для удобства.

C. CHROM (кнопка цветности видеокамеры)

Вы можете наложить движущееся изображение поверх неподвижного изображения, которое может служить фоном. Например, Вы можете выполнить съемку объекта на голубом фоне. Голубая часть подвижного изображения поменяется местами с неподвижным изображением.

M. OVERLAP (перекрывание памяти)

Вы можете сделать плавный ввод движущегося изображения поверх неподвижного изображения.



Superimposing a still image in the "Memory Stick" on a moving image – MEMORY MIX

Before operation

Insert a Hi8 Hi8/Digital8 tape for recording and a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to CAMERA.
- (2) Press MEMORY MIX in the standby mode. The last recorded or last composed image appears on the lower part of the screen as a thumbnail image.
- (3) Press MEMORY +/- to select the still image you want to superimpose. To see the previous image, press MEMORY -. To see the next image, press MEMORY +.
- (4) Turn the SEL/PUSH EXEC dial to select the desired mode. The mode changes as follows:
M. CHROM ↔ M. LUMI ↔ C. CHROM ↔ M. OVERLAP
- (5) Press the SEL/PUSH EXEC dial. The still image is superimposed on the moving image.
- (6) Turn the SEL/PUSH EXEC dial to adjust the effect.

- M. CHROM – The colour (blue) scheme of the area in the still image which is to be swapped with a moving image
 - M. LUMI – The colour (bright) scheme of the area in the still image which is to be swapped with a moving image
 - C. CHROM – The colour (blue) scheme of the area in the moving image which is to be swapped with a still image
 - M. OVERLAP – No adjustment necessary
- The fewer bars there are on the screen, the stronger the effect.

Наложение неподвижного изображения из "Memory Stick" на подвижное изображение – MEMORY MIX

Перед началом работы

Вставьте ленту Hi8 Hi8/Digital8 для записи и "Memory Stick" в Вашу видеокамеру.

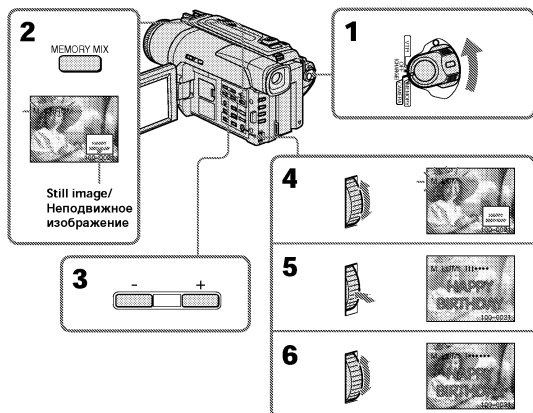
- (1) Установите переключатель POWER в положение CAMERA.
- (2) Нажмите кнопку MEMORY MIX в режиме ожидания. Последнее записанное или скомпонованное изображение появится в нижней части экрана в виде крохотного изображения.
- (3) Нажмите кнопку MEMORY +/- для выбора неподвижного изображения, которое Вы хотите наложить на подвижное. Для просмотра предыдущего изображения нажмите кнопку MEMORY -. Для просмотра следующего изображения нажмите кнопку MEMORY +.
- (4) Поверните диск SEL/PUSH EXEC для выбора нужного режима. Режим будет изменяться следующим образом:
M. CHROM ↔ M. LUMI ↔ C. CHROM ↔ M. OVERLAP
- (5) Нажмите диск SEL/PUSH EXEC. Неподвижное изображение будет наложено на подвижное.
- (6) Поверните диск SEL/PUSH EXEC для регулировки эффекта.

- M. CHROM – Цветовая гамма (голубая) участка в неподвижном изображении, который будет заменен на подвижное изображение
- M. LUMI – Цветовая гамма (яркая) участка в неподвижном изображении, который будет заменен на подвижное изображение
- C. CHROM – Цветовая гамма (голубая) участка в неподвижном изображении, который будет заменен на подвижное изображение
- M. OVERLAP – Не требуется никаких регулировок

Чем меньше полос на экране, тем сильнее эффект.

Superimposing a still image in the "Memory Stick" on a moving image – MEMORY MIX

(7) Press START/STOP to start recording.



To change the still image to superimpose

Do either of the following:
– Press MEMORY+/- before step 7.
– Press the SEL/PUSH EXEC dial before step 7, and repeat the procedure from step 4.

To change the mode setting

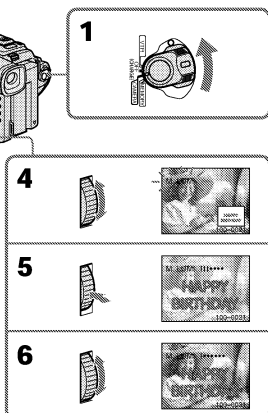
Press the SEL/PUSH EXEC dial before step 7, and repeat the procedure from step 4.

To cancel M. CHROM/M. LUMI/C. CHROM/M.OVERLAP

Press MEMORY MIX.

Наложение неподвижного изображения из "Memory Stick" на подвижное изображение – MEMORY MIX

(7)Нажмите кнопку START/STOP для начала записи.



Для изменения неподвижного изображения для наложения

Выполните следующее:
–Нажмите кнопку MEMORY+/- перед пунктом 7.
–Нажмите диск SEL/PUSH EXEC перед пунктом 7 и повторите процедуру, начиная с пункта 4.

Для изменения установки режима

Нажмите диск SEL/PUSH EXEC перед пунктом 7 и повторите процедуру с пункта 4.

Для отмены установки M. CHROM/M. LUMI/C. CHROM/M.OVERLAP

Нажмите кнопку MEMORY MIX.

Superimposing a still image in the "Memory Stick" on a moving image – MEMORY MIX

During recording

You cannot change the mode setting.

The "Memory Stick" supplied with your camcorder stores 20 images

–For M. CHROM: 18 images (such as a frame) 100-0001~100-0018
–For C. CHROM: 2 images (such as a background) 100-0019~100-0020

Sample images

Sample images stored in the "Memory Stick" supplied with your camcorder are protected (p. 128).

When you select M.OVERLAP

You cannot change the still image or the mode setting.

Наложение неподвижного изображения из "Memory Stick" на подвижное изображение – MEMORY MIX

Во время записи

Вы не можете изменить установку режима.

"Memory Stick", прилагаемая к Вашей видеокамере, вмещает 20 изображений

–Для M. CHROM: 18 изображений (например, кадр) 100-0001~100-0018
–Для C. CHROM: два изображения (например, фон) 100-0019~100-0020

Образцы изображений

Образцы изображений на "Memory Stick", прилагаемой к Вашей видеокамере, защищены от стирания (стр. 128).

Если Вы выберете M. OVERLAP

Вы не можете изменять неподвижное изображение или установку режима.

"Memory Stick" operations Операции с "Memory Stick"

113

112

Recording an image from a tape as a still image

Your camcorder can read moving image data recorded on a tape in the Digital8 system, and record it as a still image on a "Memory Stick". Your camcorder can also take in moving image data through the input connector and record it as a still image on a "Memory Stick".

Before operation

Insert a tape recorded in the Digital8 system and a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- (2) Press . The image recorded on the tape is played back.
- (3) Keep pressing PHOTO lightly until the image from the tape freezes. CAPTURE appears on the LCD screen or in the viewfinder. Recording does not start yet.
- (4) Press PHOTO deeper. The image displayed on the screen will be recorded on the "Memory Stick". Recording is complete when the bar scroll indicator disappears.

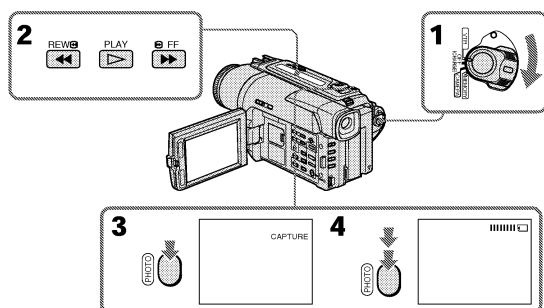
Запись изображения с ленты как неподвижного изображения

Ваша видеокамера может считывать данные подвижного изображения, записанные на ленте в цифровой системе Digital8, и записывать его как неподвижное изображение на "Memory Stick". Ваше видеокамера также позволяет вводить данные подвижного изображения через разъем входного сигнала и записывать их как неподвижное изображение на "Memory Stick".

Перед началом работы

Вставьте ленту, записанную в системе Digital8, и "Memory Stick" в Вашу видеокамеру.

- (1) Установите переключатель POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/DCR-TRV520E).
- (2) Нажмите кнопку . Начнется воспроизведение изображения, записанного на ленте.
- (3) Держите слегка нажатой кнопку PHOTO до тех пор, пока изображение с ленты не будет "заморожено". На экране ЖКД или в видеоскопелте появится индикация "CAPTURE". Запись пока не начнется.
- (4) Нажмите кнопку PHOTO сильнее. Изображение, отображаемое на экране, будет записано на "Memory Stick". Запись считается завершенной, если исчезнет перемещающийся полосатый индикатор.



Recording an image from a tape as a still image

When the access lamp is lit or flashing

Never shake or strike the unit. Also do not turn the power off, eject the "Memory Stick" or remove the battery pack. Otherwise, an image data breakdown may occur.

If appears on the LCD screen or in the viewfinder

The inserted "Memory Stick" is incompatible with your camcorder because its format does not conform with your camcorder. Check the format of the "Memory Stick".

If you press PHOTO lightly in the playback mode

Your camcorder stops momentarily.

Sound recorded on a tape

You cannot record the audio from a tape.

Titles superimposed on tapes

You cannot record the titles on the "Memory Stick." However, you can record titles which have already been recorded on tapes.

When you press PHOTO on the Remote Commander

Your camcorder immediately records the image that is on the screen when you press the button.

Запись изображения с ленты как неподвижного изображения

Если лампочка доступа горит или мигает

Не трясите и не стучите по Вашей видеокамере. Также не выключайте питание, не извлекайте "Memory Stick" из отсека и не снимайте батарейный блок. В противном случае данные изображения могут быть повреждены.

Если на экране ЖКД или в видеоскопелте появится индикация

Вставлена "Memory Stick", которая несовместима с Вашей видеокамерой, поскольку ее формат не соответствует видеокамере. Проверьте формат "Memory Stick".

Если в режиме воспроизведения слегка нажать кнопку PHOTO

Ваша видеокамера на мгновение остановится.

Звук, записанный на ленту

Вы не можете записывать звук с ленты.

Титры, наложенные на ленту

Вы можете записывать титры на "Memory Stick". Однако, Вы можете записывать титры, которые уже записаны на лентах.

Если Вы нажмете кнопку PHOTO на пульте дистанционного управления

Ваша видеокамера тотчас же запишет изображение, отображаемое на экране, если Вы нажмете эту кнопку.

"Memory Stick" operations Операции с "Memory Stick"

114

115

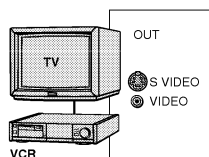
Recording an image from a tape as a still image

Recording a still image from other equipment

- DCR-TRV620E only

- (1) Set the POWER switch to VTR and set DISPLAY to LCD in the menu settings.
- (2) Play back the recorded tape, or turn the TV on to see the desired programme. The image from TV or VCR appears on the LCD or in the viewfinder.
- (3) Follow the steps 3 and 4 on page 114.

Using the A/V connecting cable



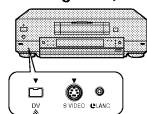
Connect the yellow plug of the A/V connecting cable to the video jack on the VCR or the TV.

If your TV or VCR has an S video jack

Connect using an S video cable (not supplied) to obtain high-quality pictures. With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable.

Connect an S video cable (not supplied) to the S video jacks of both your camcorder and the TV or VCR.

Using the i.LINK cable (the DV connecting cable)



(not supplied)/
(не прилагается)

116

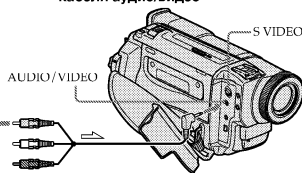
Запись изображения с ленты как неподвижного изображения

Запись неподвижного изображения с другого аппарата

- Только DCR-TRV620E

- (1) Установите переключатель POWER в положение VTR и установите опцию DISPLAY в положение LCD в установках меню.
- (2) Начните воспроизведение записанной ленты или включите телевизор для просмотра нужной программы. На экране ЖКД или в видоискателе появится изображение от телевизора или КВМ.
- (3) Выполните действия пунктов 3 и 4 на стр. 114.

Использование соединительного кабеля аудио/видео

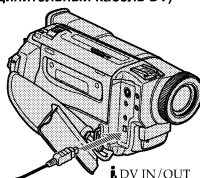


Подсоедините желтый штекер соединительного кабеля аудио/видео к видеогнезду на КВМ или телевизоре.

Если в Вашем телевизоре или КВМ имеется гнездо S видео

Выполните подсоединение с помощью кабеля S видео (не прилагается) для получения высококачественных изображений. При данном подсоединении Вам не нужно подсоединять желтый (видео) штекер соединительного кабеля аудио/видео. Подсоедините кабель S видео (не прилагается) к гнездам S видео на Вашей видеокамере и КВМ.

Использование кабеля i.LINK (соединительный кабель DV)




117

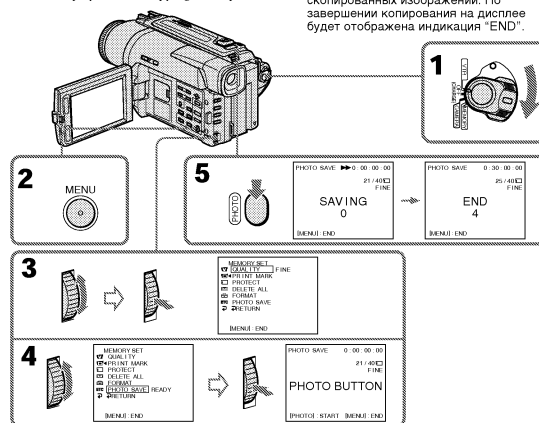
Copying still images from a tape - Photo save

Using the search function, you can automatically take in only still images from tapes recorded in the Digital8 system and record them on a "Memory Stick" in sequence.

Before operation

- Insert a tape recorded in the Digital8 system and rewind the tape.
- Insert a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- (2) Press MENU to push the menu display appear.
- (3) Turn the SEL/PUSH EXEC dial to select , then press the dial.
- (4) Turn the SEL/PUSH EXEC dial to select PHOTO SAVE, then press the dial. "PHOTO BUTTON" appears on the LCD screen or in the viewfinder.
- (5) Press PHOTO firmly. The still image from the tape is recorded on the "Memory Stick". The number of still images copied is displayed. END is displayed when copying is completed.



"Memory Stick" operations

Операции с "Memory Stick"

117

Copying still images from a tape - Photo save

To stop copying

Press MENU to stop copying.

When the memory of the "Memory Stick" is full

MEMORY FULL appears on the LCD screen, and the copying stops. Insert another "Memory Stick" and repeat the procedure from step 2.

When the access lamp is lit or flashing

Never shake or strike your camcorder. As well do not turn the power off, eject the "Memory Stick" or remove the battery pack. Otherwise, the image data breakdown may occur.

To record all the images recorded on the tape

Rewind the tape all the way back and start copying.

If the write-protect tab on the "Memory Stick" is set to LOCK

NOT READY appears when you select the item in the menu settings.

When you change the "Memory Stick" in the middle of copying

Your camcorder resumes copying from the last image recorded on the previous "Memory Stick".

Копирование неподвижных изображений с ленты - Сохранение фотоснимков в памяти

Для остановки копирования

Нажмите кнопку MENU для остановки копирования.

В случае переполнения памяти "Memory Stick"

На экране ЖКД появится индикация MEMORY FULL, и копирование остановится. Вставьте другую "Memory Stick" и повторите процедуру, начиная с пункта 2.

Если лампочка доступа горит или мигает

Никогда не трясите и не стучите по Вашей видеокамере. Также, не выключайте питание, не извлекайте "Memory Stick" из отсека и не снимайте батарейный блок. В противном случае данные изображения могут быть повреждены.

Для записи всех изображений, записанных на ленте

Перематывайте ленту до конца назад и начните копирование.

Если лепесток защиты записи на "Memory Stick" установлен в положение LOCK

Появится индикация индикация NOT READY, если Вы выберете пункт в установках меню.

Если Вы замените "Memory Stick" в середине копирования

Ваша видеокамера возобновит копирование, начиная с последнего изображения, записанного на предыдущей "Memory Stick".

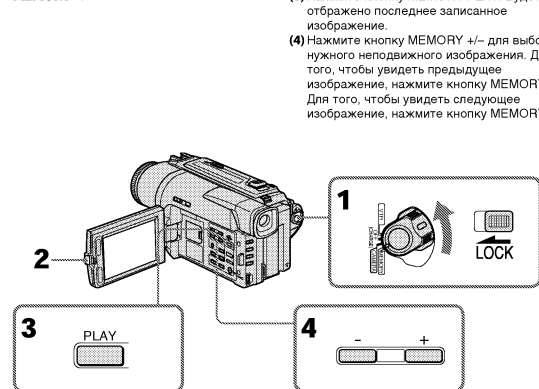
Viewing a still image - Memory Photo playback

You can play back still images recorded on a "Memory Stick". You can also play back 6 images at a time by selecting the index screen.

Before operation

Insert a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to MEMORY, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E). Make sure that the LOCK is set to the right (unlock) position.
- (2) Open the LCD panel while pressing OPEN.
- (3) Press MEMORY PLAY. The last recorded image is displayed.
- (4) Press MEMORY +/- to select the desired still image. To see the previous image, press MEMORY -. To see the next image, press MEMORY +.



To stop memory photo playback

Press MEMORY PLAY.

Просмотр неподвижного изображения - Воспроизведение фотоснимков из памяти

Вы можете воспроизводить неподвижные изображения, записанные на "Memory Stick". Вы можете также воспроизводить 6 изображений одновременно путем выбора индексного экрана.

Перед началом работы

Вставьте "Memory Stick" в Вашу видеокамеру.

- (1) Установите переключатель POWER в положение MEMORY, VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E). Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Назвав кнопку OPEN, откройте панель ЖКД.
- (3) Нажмите кнопку MEMORY PLAY. Будет отображено последнее записанное изображение.
- (4) Нажмите кнопку MEMORY +/- для выбора нужного неподвижного изображения. Для того, чтобы увидеть предыдущее изображение, нажмите кнопку MEMORY -. Для того, чтобы увидеть следующее изображение, нажмите кнопку MEMORY +.

"Memory Stick" operations

Операции с "Memory Stick"

119

118

Viewing a still image – Memory Photo playback

To play back recorded images on a TV screen

- Connect your camcorder to the TV with the A/V connecting cable supplied with your camcorder before the operation.
- When operating memory photo playback on a TV or the LCD screen, the image quality may appear to have deteriorated. This is not a malfunction. The image data is as good as ever.
- Turn the audio volume of the TV down before operation, or noise (howling) may be output from the TV speakers.

If "NO FILE" appears on the LCD screen or in the viewfinder

No image is recorded on the "Memory Stick."

Image data modified with personal computers or shot with other equipment

You may not be able to play them back with your camcorder.

Просмотр неподвижного изображения – Воспроизведение фотоснимков из памяти

Для воспроизведения записанных изображений на экране телевизора

- Перед началом воспроизведения подсоедините Вашу видеокамеру к телевизору с помощью соединительного кабеля аудио/видео, прилагаемого к Вашей видеокамере.
- При воспроизведении фотоснимков из памяти на экране телевизора или ЖКД качество изображения может ухудшиться. Это не является неисправностью. Данные изображения находятся в том же состоянии, как и прежде.
- Перед началом воспроизведения уменьшите громкость телевизора вниз, иначе через акустическую систему телевизора может послышаться шум (завывание).

Если на экране ЖКД или в видискателе появится индикация "NO FILE" На "Memory Stick" нет записанных изображений.

Данные изображения, видоизмененные с помощью персонального компьютера или снятые с помощью другой аппаратуры. Вы не сможете воспроизвести их с помощью Вашей видеокамеры.

Screen indicators during still image playback

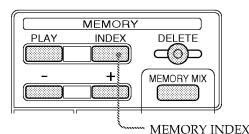


Экранные индикаторы во время воспроизведения неподвижных изображений

Viewing a still image – Memory Photo playback

Playing back 6 recorded images at a time (index screen)

You can play back 6 recorded images at a time. This function is especially useful when searching for a particular image.



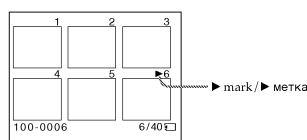
Press MEMORY INDEX. A red mark appears above the image that is displayed before changing to the index screen mode.

Просмотр неподвижного изображения – Воспроизведение фотоснимков из памяти

Воспроизведение 6 записанных изображений одновременно (индексный экран)

Вы можете воспроизвести 6 записанных изображений одновременно. Эта функция является особенно полезной при выполнении поиска отдельных изображений.

Нажмите кнопку MEMORY INDEX. Красная метка появится над изображением, которое будет отображаться перед изменением режима индексного экрана.



- To display the following 6 images, keep pressing MEMORY +.
- To display the previous 6 images, keep pressing MEMORY –.

To return to the normal playback screen (single screen)

Press MEMORY +/- to move the mark to the image you want to display on full screen, then press MEMORY PLAY.

- Для отображения следующих 6 изображений держите нажатой кнопку MEMORY +.
- Для отображения предыдущих 6 изображений держите нажатой кнопку MEMORY –.

Для возврата к экрану обычного воспроизведения (одиночный экран)

Нажмите кнопку MEMORY +/- для перемещения знака к изображению, которое Вы хотите отобразить на полный экран, а затем нажмите кнопку MEMORY PLAY.

Viewing a still image – Memory Photo playback

Note

When displaying the index screen, the number appears above each image. This indicates the order in which images are recorded on the "Memory Stick". These numbers are different from the data file names.

Files modified with personal computers. These files may not be displayed on the index screen. Image files shot with other equipment may not be displayed on the index screen either.

Viewing the recorded images using a personal computer

The image data recorded with your camcorder is compressed in the JPEG format. If you use the application software, PictureGear 4.1 Lite supplied with your camcorder, you can see images recorded on the "Memory Stick" on a computer screen. Use the PC serial cable supplied with your camcorder for this operation.

Просмотр неподвижного изображения – Воспроизведение фотоснимков из памяти

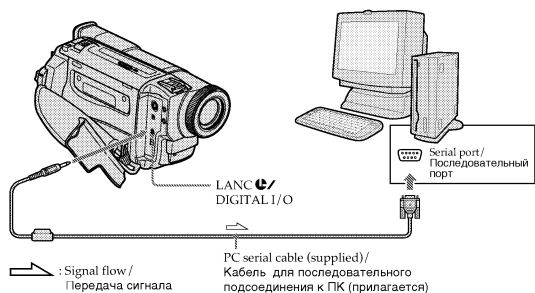
Примечание

При отображении индексного экрана над каждым изображением будет появляться номер. Он означает порядок, в котором изображения записаны на "Memory Stick". Эти номера отличаются от имен файлов данных.

Данные изображения, видоизмененные с помощью персонального компьютера. Эти файлы могут быть не отображены на индексном экране. Файлы изображений, снятых с помощью другой аппаратуры, могут не отображаться ни на одном из индексных экранов.

Просмотр записанных изображений с помощью персонального компьютера

Данные изображения, записанные с помощью Вашей видеокамеры, сжимаются до формата JPEG. Если Вы используете прикладное программное обеспечение, PictureGear 4.1 Lite, прилагаемое к Вашей видеокамере, Вы можете увидеть изображения, записанные на "Memory Stick", на экране компьютера. Используйте шнур для последовательного подсоединения к ПК, прилагаемый к Вашей видеокамере, для этой операции.



Copying the image recorded on "Memory Stick" to tapes

– DCR-TRV620E only

You can copy still images or titles recorded on "Memory Stick" and record them to Hi8 Hi8V/Digital8 tapes.

Before operation

Insert a Hi8 Hi8V/Digital8 tape for recording and a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to VTR.
- (2) Using the video control buttons, search a point where you want to record the desired still image. Set the Hi8 Hi8V/Digital8 tape to playback pause mode.
- (3) Press REC and the button on its right simultaneously on your camcorder. The Hi8 Hi8V/Digital8 tape is set to the recording pause mode.
- (4) Press MEMORY PLAY to play back the still image you want to copy (p. 119).
- (5) Press II to start recording and press II again to stop.
- (6) If you have more to copy, repeat steps 4 and 5.

Копирование изображений, записанных на "Memory Stick", на ленты

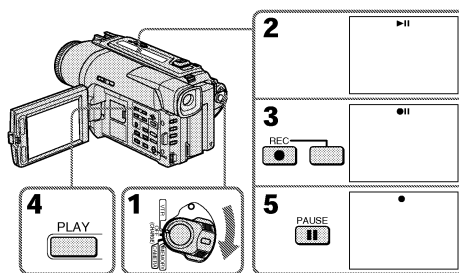
– Только DCR-TRV620E

Вы можете копировать неподвижные изображения или титры, записанные на "Memory Stick", и записывать их на ленты Hi8 Hi8V/Digital8.

Перед началом работы

Вставьте ленту Hi8 Hi8V/Digital8 для записи и "Memory Stick" в Вашу видеокамеру.

- (1) Установите переключатель POWER в положение VTR.
- (2) Используя кнопки видеоконтроля, найдите точку, где Вы хотите записать нужное неподвижное изображение. Установите ленту Hi8 Hi8V/Digital8 в режим паузы воспроизведения.
- (3) Нажмите одновременно кнопку REC и кнопку справа от нее на Вашей видеокамере. Лента Hi8 Hi8V/Digital8 будет установлена в режим паузы воспроизведения.
- (4) Нажмите кнопку MEMORY PLAY для воспроизведения неподвижного изображения, которое Вы хотите скопировать (стр. 119).
- (5) Нажмите кнопку II для начала записи и нажмите кнопку II еще раз для остановки.
- (6) Если Вы хотите продолжить копирование, повторите действия пунктов 4 и 5.



To stop copying in the middle Press II.

Для остановки копирования посередине. Нажмите кнопку II.

Copying the image recorded on "Memory Stick" to tapes

During copying

You cannot operate the following buttons: MEMORY PLAY, MEMORY INDEX, MEMORY DELETE, MEMORY MIX, MEMORY +, and MEMORY -.

Note on the index screen

You cannot record the index screen.

If you press the EDIT/SEARCH buttons during pause mode, Memory playback stops.

Image data modified with personal computers or shot with other equipment

You may not be able to copy them with your camcorder.

If you press the DISPLAY button in the standby or recording mode

You can see memory playback and the file name indicators in addition to the indicators pertinent to Hi8 Hi8 Digital8 tapes, such as the time code indicator.

When copying

You cannot copy the image recorded on "Memory Stick" with titles to tapes.

Копирование изображений, записанных на "Memory Stick", на ленты

Во время копирования

Вы не можете оперировать следующими кнопками: MEMORY PLAY, MEMORY INDEX, MEMORY DELETE, MEMORY MIX, MEMORY + и MEMORY -.

Примечание по индексному экрану

Вы не можете записать индексный экран.

Если Вы нажмете кнопки EDIT/SEARCH в режиме паузы, воспроизведение из памяти остановится.

Данные изображения, преобразованного с помощью персонального компьютера или снятого с помощью другого аппарата

Возможно, Вы не сможете их скопировать с помощью Вашей видеокамеры.

Если Вы нажмете кнопку DISPLAY в режиме ожидания или записи

Вы можете увидеть воспроизведение из памяти и индикаторы названий файлов в дополнение к индикаторам, относящимся к лентам Hi8 Hi8 Digital8, таким как индикатор кода времени.

При копировании

Вы не можете копировать изображения, записанные на "Memory Stick", с титрами на ленты.

Enlarging recorded still images on "Memory Stick" - Memory PB ZOOM

You can enlarge still images recorded on a "Memory Stick".

Before operation

Insert a "Memory Stick" into your camcorder.

(1) Set the POWER switch to MEMORY, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).

Make sure that the LOCK is set to the right (unlock) position.

(2) Press PB ZOOM on your camcorder while you are playing back images recorded on "Memory Stick". The still image is enlarged, and "1" appears on the LCD screen or in the viewfinder.

(3) Turn SEL/PUSH EXEC dial to move the enlarged image, then press the dial.

↑ : The image moves downwards.

↓ : The image moves upwards.

← : becomes available.

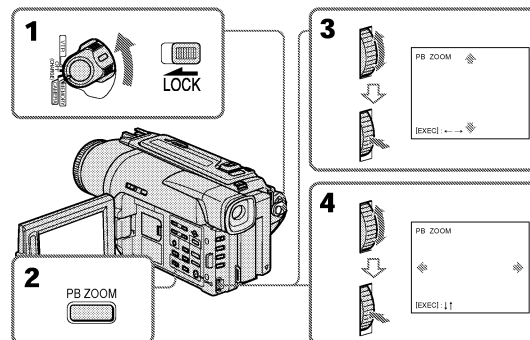
(4) Turn SEL/PUSH EXEC dial to move the enlarged image, then press the dial.

← : The image moves rightward.

(Turn the dial downward.)

→ : The image moves leftward.

(Turn the dial upward.)



To cancel memory PB ZOOM function
Press PB ZOOM.

Pictures processed by PB ZOOM function
Pictures processed by PB ZOOM function are not output through the DV IN/OUT or DV OUT jack.

Увеличение неподвижных записанных изображений на "Memory Stick" - Память PB ZOOM

Вы можете увеличивать изображения, записанные на "Memory Stick".

Перед операцией

Вставьте "Memory Stick" в Вашу видеокамеру.

(1) Установите переключатель POWER в положение MEMORY или VTR. Убедитесь, что переключатель LOCK установлен в правое (не зафиксированное) положение.

(2) Нажмите кнопку PB ZOOM на Вашей видеокамере во время воспроизведения изображений, записанных на "Memory Stick". Неподвижное изображение будет увеличено, а на экране ЖКД или в видоискателе появится индикация "1".

(3) Поверните диск SEL/PUSH EXEC для перемещения увеличенного изображения, а затем нажимайте диск.

↑ : Изображение перемещается вниз.

↓ : Изображение перемещается вверх.

← : появится на дисплее.

(4) Поверните диск SEL/PUSH EXEC для перемещения увеличенного изображения, а затем нажимайте диск.

← : Изображение перемещается вправо.

(Поверните диск вниз)

→ : Изображение перемещается влево.

(Поверните диск вверх)

Для отмены функции PB ZOOM
Нажмите кнопку PB ZOOM.

Изображения, обрабатываемые с помощью функции PB ZOOM
Изображения, обработанные с помощью функции PB ZOOM, не передаются через гнездо DV IN/OUT или DV OUT.

124

"Memory Stick" operations

Операции с "Memory Stick"

125

Playing back images in a continuous loop - SLIDE SHOW

You can automatically play back images in sequence. This function is useful especially when checking recorded images or during a presentation.

Before operation

Insert a "Memory Stick" into your camcorder.

(1) Set the POWER switch to MEMORY. Make sure that the LOCK is set to the right (unlock) position.

(2) Press MENU to make the menu display appear.

(3) Turn the SEL/PUSH EXEC dial to select then press the dial.

(4) Turn the SEL/PUSH EXEC dial to select SLIDE SHOW, then press the dial.

(5) Press MEMORY PLAY. Your camcorder plays back the images recorded on the "Memory Stick" in sequence.

Воспроизведение изображений в непрерывной последовательности по замкнутому циклу - SLIDE SHOW

Вы можете автоматически воспроизводить изображения в непрерывной последовательности. Эта функция является полезной особенно при проверке записанных изображений или во время презентации.

Перед началом работы

Вставьте "Memory Stick" в Вашу видеокамеру.

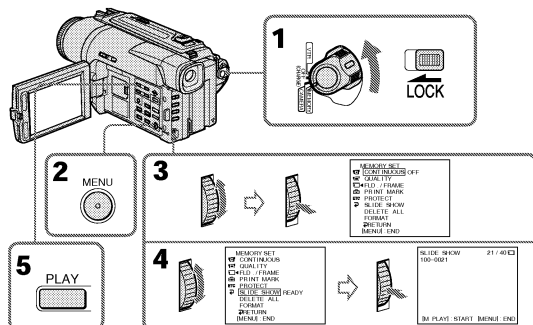
(1) Установите переключатель POWER в положение MEMORY. Убедитесь, что фиксатор LOCK установлен в правое (незафиксированное) положение.

(2) Нажмите кнопку MENU, чтобы на дисплее появился индикатор меню.

(3) Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажимайте диск.

(4) Поверните диск SEL/PUSH EXEC для выбора установки SLIDE SHOW, а затем нажимайте диск.

(5) Нажмите кнопку MEMORY PLAY. Ваша видеокамера будет воспроизводить изображения, записанные на "Memory Stick", в непрерывной последовательности.



126

Playing back images in a continuous loop - SLIDE SHOW

To stop the slide show

Press MENU.

To pause during a slide show

Press MEMORY PLAY.

To start the slide show from a particular image

Select the desired image using MEMORY +/- buttons before step 2.

To view the recorded images on TV

Connect your camcorder to a TV with the A/V connecting cable supplied with your camcorder before operation.

If you change the "Memory Stick" during operation

The slide show does not operate. If you change the "Memory Stick", be sure to follow the steps again from the beginning.

Воспроизведение изображений в непрерывной последовательности по замкнутому циклу - SLIDE SHOW

Для остановки показа слайдов

Нажмите кнопку MENU.

Для паузы во время показа слайдов

Нажмите кнопку MEMORY PLAY.

Для начала показа слайдов с определенного изображения

Выберите нужное изображение с помощью кнопок MEMORY +/- перед пунктом 2.

Для просмотра записанных изображений на экране телевизора

Перед началом процедуры подсоедините Вашу видеокамеру к телевизору с помощью соединительного кабеля аудио/видео, прилагаемого к Вашей видеокамере.

В случае замены "Memory Stick" во время просмотра

Показ слайдов приостановится. В случае замены "Memory Stick" Вам следует начать действия сначала.

"Memory Stick" operations

Операции с "Memory Stick"



127

Preventing accidental erasure - Image protection

To prevent accidental erasure of important images, you can protect selected images.

Before operation

Insert a "Memory Stick" into your camcorder.



- (1) Set the POWER switch to MEMORY, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E). Make sure that the LOCK is set to the right (unlock) position.
- (2) Play back the image you want to protect (p. 119).
- (3) Press MENU to make the menu display appear.
- (4) Turn the SEL/PUSH EXEC dial to select , then press the dial.
- (5) Turn the SEL/PUSH EXEC dial to select PROTECT, then press the dial.
- (6) Turn the SEL/PUSH EXEC dial to select ON, then press the dial.
- (7) Press MENU to erase the menu display. The  mark is displayed beside the data file name of the protected image.

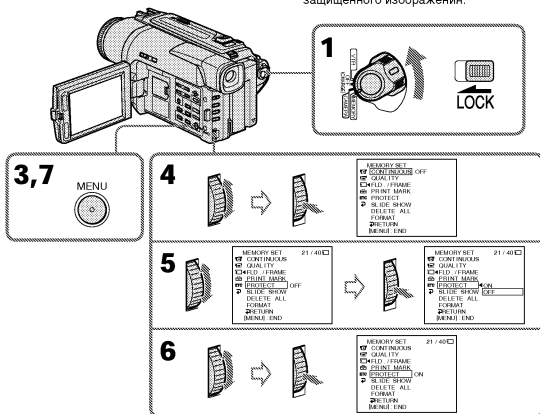
Предотвращение случайного стирания - Защита изображения

Для предотвращения случайного стирания важных изображений Вы можете защитить выбранные изображения.

Перед началом работы

Вставьте "Memory Stick" в Вашу видеокамеру.

- (1) Установите переключатель POWER в положение MEMORY, VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/ TRV520E). Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Воспроизведите изображение, которое Вы хотите защитить (стр. 119).
- (3) Нажмите кнопку MENU, чтобы на дисплее появилась индикация меню.
- (4) Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажмите диск.
- (5) Поверните диск SEL/PUSH EXEC для выбора установки PROTECT, а затем нажмите диск.
- (6) Поверните диск SEL/PUSH EXEC для выбора установки ON, а затем нажмите диск.
- (7) Нажмите кнопку MENU для стирания индикации меню. На дисплее появится знак  рядом с названием файла данных защищенного изображения.



Preventing accidental erasure - Image protection

To cancel image protection

Select OFF in step 6, then press the SEL/PUSH EXEC dial.

Note

Formatting erases all information on the "Memory Stick", including the protected image data. Check the contents of the "Memory Stick" before formatting.

If the write-protect tab on the "Memory Stick" is set to LOCK

You cannot carry out image protection.

Предотвращение случайного стирания - Защита изображения

Для отмены защиты изображения

Выберите установку OFF в пункте 6, а затем нажмите диск SEL/PUSH EXEC.

Примечание

Форматирование стирает всю информацию на "Memory Stick", включая данные защищенного изображения. Проверьте содержание "Memory Stick" перед форматированием.

Если лепесток защиты записи на "Memory Stick" установлен в положение LOCK

Вы не сможете выполнить защиту изображения.

"Memory Stick" operations

Операции с "Memory Stick"

128

129

Deleting images

You can delete images stored in a "Memory Stick".

Before operation

Insert a "Memory Stick" into your camcorder.

Deleting selected images

- (1) Set the POWER switch to MEMORY, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E). Make sure that the LOCK is set to the right (unlock) position.
- (2) Play back the image you want to delete (p. 119).
- (3) Press MEMORY DELETE. "DELETE?" appears on the LCD screen.
- (4) Press MEMORY DELETE again. The selected image is deleted.

Удаление изображений

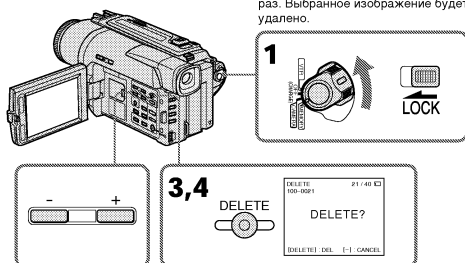
Вы можете удалить изображения, хранимые на "Memory Stick".

Перед началом работы

Вставьте "Memory Stick" в Вашу видеокамеру.

Удаление выбранных изображений


- (1) Установите переключатель POWER в положение MEMORY, VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/ TRV520E). Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Воспроизведите изображение, которое Вы хотите удалить (стр. 119).
- (3) Нажмите кнопку MEMORY DELETE с помощью заостренного предмета. На экране ЖКД появится индикация "DELETE?".
- (4) Нажмите кнопку MEMORY DELETE еще раз. Выбранное изображение будет удалено.



To cancel deleting an image

Press MEMORY - in step 4.

To delete an image displayed on the index screen

Press MEMORY +/- to move the  indicator to the desired image and follow steps 3 and 4.


Notes

- To delete a protected image, first cancel image protection.
- Once you delete an image, you cannot restore it. Check the images to delete carefully before deleting them.

Deleting images

Deleting all the images


You can delete all the unprotected images in the "Memory Stick".

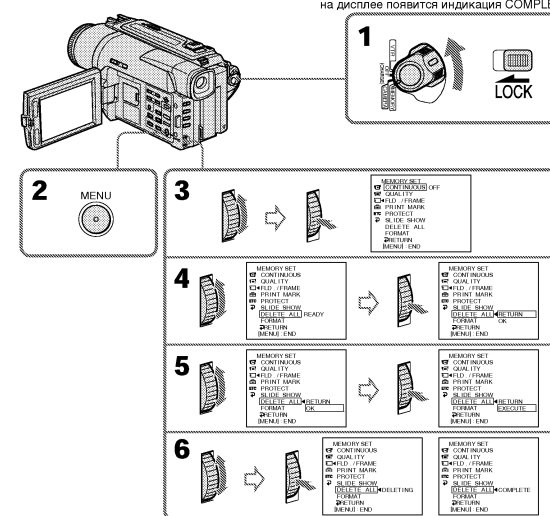
- (1) Set the POWER switch to MEMORY, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/ TRV520E). Make sure that the LOCK is set to the right (unlock) position.
- (2) Press MENU to make the menu display appear.
- (3) Turn the SEL/PUSH EXEC dial to select , then press the dial.
- (4) Turn the SEL/PUSH EXEC dial to select DELETE ALL, then press the dial.
- (5) Turn the SEL/PUSH EXEC dial to select EXECUTE, then press the dial. DELETING appears on the LCD screen. When all the unprotected images are deleted, COMPLETE is displayed.

Удаление изображений

Удаление всех изображений

Вы можете удалить все незащищенные изображения на "Memory Stick".

- (1) Установите переключатель POWER в положение MEMORY, VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/ TRV520E). Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Нажмите кнопку MENU, чтобы на дисплее появилась индикация меню.
- (3) Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажмите диск.
- (4) Поверните диск SEL/PUSH EXEC для выбора установки DELETE ALL, а затем нажмите диск.
- (5) Поверните диск SEL/PUSH EXEC для выбора установки EXECUTE, а затем нажмите диск. Индикация DELETING появится на экране ЖКД.
- (6) Поверните диск SEL/PUSH EXEC для выбора установки COMPLETE, а затем нажмите диск. Индикация COMPLETE появится на дисплее.



"Memory Stick" operations

Операции с "Memory Stick"

130

131

Deleting images

To cancel deleting all the images in the "Memory Stick"

Select RETURN in step 5, then press the SEL/PUSH EXEC.

While DELETING appears

Do not turn the POWER switch or press any buttons.

If the write-protect tab on the "Memory Stick" is set to LOCK

You cannot delete images.

Удаление изображений

Для отмены удаления всех изображений на "Memory Stick"

Выберите установку RETURN в пункте 5, а затем нажмите кнопку SEL/PUSH EXEC

Во время отображения индикации DELETING

Не изменяйте положение переключателя POWER и не нажимайте каких-либо кнопок.

Если лепесток защиты записи на "Memory Stick" установлен в положение LOCK
Вы не можете удалить изображения.



Writing a print mark - PRINT MARK

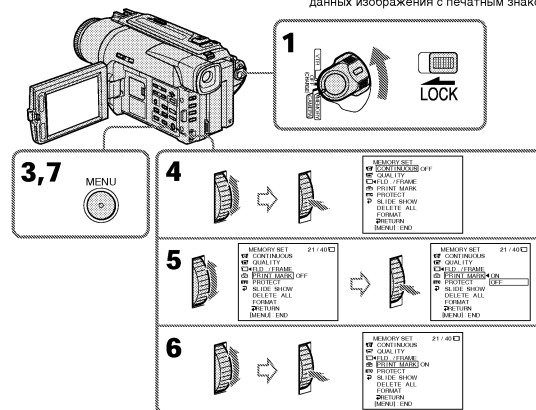
You can specify the recorded still image to print out. This function is useful for printing out still images later.

Your camcorder conforms with the DPOF (Digital Print Order Format) standard for specifying the still images to print out.

Before operation

Insert a "Memory Stick" into your camcorder.

- (1) Set the POWER switch to MEMORY, VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E). Make sure that the LOCK is set to the right (unlock) position.
- (2) Play back the image you want to write a print mark. (p. 119)
- (3) Press MENU to display the menu.
- (4) Turn the SEL/PUSH EXEC dial to select , then press the dial.
- (5) Turn the SEL/PUSH EXEC dial to select PRINT MARK, then press the dial.
- (6) Turn the SEL/PUSH EXEC dial to select ON, then press the dial.
- (7) Press MENU to erase the menu display. The  mark is displayed beside the data file name of the image with a print mark.





Запись печатных знаков - PRINT MARK

Вы можете указать записанные изображения для распечатки. Эта функция является полезной для распечатки неподвижных изображений позже.
Ваша видеокамера соответствует стандарту DPOF (цифровой служебный формат распечатки) для указания неподвижных изображений для распечатки.

Перед началом работы

Вставьте "Memory Stick" в Вашу видеокамеру.

- (1) Установите переключатель POWER в положение MEMORY, VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E). Убедитесь, что фиксатор LOCK установлен в правом (незафиксированном) положении.
- (2) Воспроизведите изображение, на котором Вы хотите записать печатный знак. (стр. 119)
- (3) Нажмите кнопку MENU, чтобы на дисплее появилось меню.
- (4) Поверните диск SEL/PUSH EXEC для выбора установки , а затем нажмите диск.
- (5) Поверните диск SEL/PUSH EXEC для выбора установки PRINT MARK, а затем нажмите диск.
- (6) Поверните диск SEL/PUSH EXEC для выбора установки ON, а затем нажмите диск.
- (7) Нажмите кнопку MENU для стирания индикации меню. На дисплее появится знак  рядом с названием файла данных изображения с печатным знаком.

132

133

Writing a print mark - PRINT MARK

To cancel writing print marks

Select OFF in step 6, then press the SEL/PUSH EXEC dial.

If the write-protect tab on the "Memory Stick" is set to LOCK

You cannot write print marks on still images.

Запись печатных знаков - PRINT MARK

Для отмены записи печатных знаков

Выберите установку OFF в пункте 6, а затем нажмите диск SEL/PUSH EXEC.

Если лепесток защиты записи на "Memory Stick" установлен в положение LOCK
Вы не можете записать печатные знаки на неподвижные изображения.

— Additional Information —

Digital8 system, recording and playback

What is the "Digital8 system"?

This video system has been developed to enable digital recording to Hi8 Hi8/Digital8 video cassette.

Usable cassette tapes

We recommend using Hi8 Hi8/Digital8 video cassette.

The recording time when you use your Digital8 system camcorder on Hi8 Hi8/standard 8 tape is half the recording time when using the conventional Hi8 Hi8/standard 8 system camcorder. (120 minutes of recording time becomes 60 minutes in the SP mode.)

* If you use standard 8 tape, be sure to play back the tape on this camcorder. Mosaic pattern noise may appear when you play back standard 8 tape on other VCRs (including other DCR-TRV420E/TRV520E/TRV620E).

Note

Tapes recorded in the Digital8 system cannot be played back on Hi8 Hi8/standard 8 (analog) system machine.

Hi8 is a trademark.
Hi8 is a trademark.
D is a trademark.

Playback system

The Digital8 system or Hi8 Hi8/standard 8 system is automatically detected before the tape is played back.

During playback of tapes recorded in the Hi8 Hi8/standard 8 system, digital signals are output as the image signals from the DV IN/OUT or DV OUT jack.

Display during automatic detection of system

The Digital8 system or Hi8 Hi8/standard 8 system is automatically detected, and the playback system is automatically switched to. During switching of systems, the screen turns blue, and the following displays appear. A hissing noise also sometimes can be heard.

D → Hi8 Hi8/standard 8
Hi8 Hi8/standard 8 → D
During switching from Hi8 Hi8/standard 8 to Digital8

When you play back

Playing back an NTSC-recorded tape

You can play back tapes recorded in the NTSC video system on the LCD screen, if the tape is recorded in the SP mode.

— Дополнительная информация —

Цифровая система Digital8, запись и воспроизведение

Что такое "Цифровая система Digital8"?

Эта видеосистема была разработана для обеспечения цифровой записи на видеокассеты Hi8 Hi8/Digital8.

Используемые кассеты

Рекомендуется использовать видеокассеты Hi8 Hi8/Digital8.
Время записи при использовании Вашей видеокамеры системы Digital8 на ленте Hi8 Hi8/стандартной ленте 8 в два раза меньше, чем при использовании обычной видеокамеры Hi8 Hi8/стандартной системы 8 (120 минут времени записи становятся равными 60 минутам в режиме SP).

* При использовании стандартной ленты 8, ее следует воспроизводить на этой же видеокамере. При воспроизведении стандартной ленты 8 на других KVM (включая другие аппараты DCR-TRV420E/TRV520E/TRV620E) могут появиться помехи типа мозаики.

Примечание

Ленты, записанные в цифровой системе Digital8, не могут быть воспроизведены на аппаратуре системы Hi8 Hi8/стандартной системы 8 (аналоговой).

Hi8 является фирменным знаком.
Hi8 является фирменным знаком.
D является фирменным знаком.

Система воспроизведения

Цифровая система Digital8 или Hi8 Hi8/стандартная система 8 автоматически детектируется перед воспроизведением ленты. Во время воспроизведения лент, записанных в системе Hi8 Hi8/стандартной системе 8, цифровые сигналы выводятся в качестве сигналов изображения через гнездо DV IN/OUT или DV OUT.

Индикация во время автоматического детектирования системы

Цифровая система Digital8 или Hi8 Hi8/стандартная система 8 автоматически детектируется, а система воспроизведения автоматически включается. Во время выключения систем, экран становится голубым и появляются следующие индикации. Может быть также слышен свистящий шум.

D → Hi8 Hi8/standard 8
Hi8 Hi8/standard 8 → D
Во время переключения с системы Digital8 на систему Hi8 Hi8/стандартную систему 8
Во время переключения с системы Hi8 Hi8/стандартной системы 8 на цифровую систему Digital8

При воспроизведении

Воспроизведение лент, записанных в системе NTSC

Вы можете воспроизводить ленты, записанные в видеосистеме NTSC, на экране ЖКД, если лента записана в режиме SP.

134

135

Digital8 system, recording and playback

Copyright signal

When you play back


Using any other video camera recorder, you cannot record on a tape that has recorded copyright control signals for copyright protection of software which is played back on your camcorder.

When you record

You cannot record software on your camcorder that contains copyright control signals for copyright protection of software. COPY INHIBIT appears on the LCD screen, in the viewfinder or on the TV screen if you try to record such as software. Your camcorder does not record copyright control signals on the tape when it records.

When you playback a dual sound track tape

When you use tapes recorded in the Digital8 system

When you play back a Digital8  system tape which is dubbed from a dual sound track tape recorded in the DV system, set "HiFi SOUND" to the desired mode in the menu settings (p. 85).

Sound from speaker

| HiFi Sound Mode | Playing back a stereo tape | Playing back a dual sound track tape |
|-----------------|----------------------------|--------------------------------------|
| STEREO | Stereo | Main sound and sub sound |
| 1 | Lch | Main sound |
| 2 | Rch | Sub sound |

When you use a tape recorded in the Hi8/standard 8 system

When you play back a dual sound track tape recorded in an AFM HiFi stereo system, set "HiFi SOUND" to the desired mode in the menu settings (p. 85).

Sound from speaker

| HiFi Sound Mode | Playing back a stereo tape | Playing back a dual sound track tape |
|-----------------|----------------------------|--------------------------------------|
| STEREO | Stereo | Main sound and sub sound |
| 1 | Monaural | Main sound |
| 2 | Unnatural Sound | Sub sound |

You cannot record dual sound programmes on your camcorder.

Цифровая система Digital8 , запись и воспроизведение

Сигнал авторского права

При воспроизведении


При использовании какой-либо другой видеокамеры Вы не можете выполнять запись на ленту, на которой записаны контрольные сигналы авторского права для защиты авторских прав программ, которые воспроизводятся на Вашей видеокамере.

При записи

Вы не можете записывать на Вашей видеокамере программы, содержащие контрольные сигналы авторского права для защиты авторских прав программ. Если Вы попытаетесь записать такую программу, на экране ЖКД, в видискателе или на экране телевизора появится индикация COPY INHIBIT. При записи Ваша видеокамера не будет записывать контрольные сигналы авторского права.

При воспроизведении ленты с двойной звуковой дорожкой

При использовании лент, записанных в цифровой системе Digital8

При воспроизведении ленты в цифровой системе Digital8  на которую выполнена перезапись ленты с двойной звуковой дорожкой, записанной в цифровой видеосистеме DV, установите команду "HiFi SOUND" в нужный режим в установках меню (стр. 85).

Звук от динамика

| Режим звучания | Воспроизведение стереофонической ленты | Воспроизведение ленты с двойной звуковой дорожкой |
|----------------|--|---|
| STEREO | Стереофонический звук | Основной звук и вспомогательный звук |
| 1 | Левый канал | Основной звук |
| 2 | Правый канал | Вспомогательный звук |

При использовании лент, записанных в системе Hi8/стандартной системе 8

При воспроизведении ленты с двойной звуковой дорожкой, записанной в стереофонической системе AFM HiFi, установите команду "HiFi SOUND" в нужный режим в установках меню (стр. 85).

Звук от динамика

| Режим звучания | Воспроизведение стереофонической ленты | Воспроизведение ленты с двойной звуковой дорожкой |
|----------------|--|---|
| STEREO | Стереофонический звук | Основной звук и вспомогательный звук |
| 1 | Монофонический звук | Основной звук |
| 2 | Необычный звук | Вспомогательный звук |

Вы не можете записывать программы с двойным звучанием на Вашей видеокамере.

About i.LINK

The DV jack on this unit is an i.LINK-compliant DV input/output jack. This section describes the i.LINK standard and its features.

What is "i.LINK"?

i.LINK is a digital serial interface for handling digital video, digital audio and other data in two directions between equipment having the i.LINK jack, and for controlling other equipment.

i.LINK-compatible equipment can be connected by a single i.LINK cable. Possible applications are operations and data transactions with various digital AV equipment.

When two or more i.LINK-compatible equipment are connected to this unit in a daisy chain, operations and data transactions are possible with not only the equipment that this unit is connected to but also with other devices via the directly connected equipment. Note, however, that the method of operation sometimes varies according to the characteristics and specifications of the equipment having two or more i.LINK jacks (DV jacks) to be connected, and that operations and data transactions are sometimes not possible on some connected equipment.

Note

Normally, only one piece of equipment can be connected to this unit by the i.LINK cable (DV cable). When connecting this unit to two or more i.LINK-compatible equipment, refer to the instruction manual of the equipment to be connected.

About the Name "i.LINK"

i.LINK is a more familiar term for IEEE 1394 data transport bus proposed by SONY, and is a trademark approved by many corporations. IEEE 1394 is an international standard standardized by the Institute of Electrical and Electronic Engineers.

Относительно i.LINK

Цифровое гнездо DV на данном аппарате удовлетворяет стандарту i.LINK и является совместимым с входным/выходным гнездом цифровых видеосигналов DV. В этом разделе описан стандарт i.LINK и его основные особенности.

Что такое "i.LINK"?

i.LINK является цифровым последовательным интерфейсом для управления цифровыми видеосигналами, цифровыми аудиосигналами и другими данными в двух направлениях между аппаратами, имеющими гнезда i.LINK, а также для управления другими аппаратами. i.LINK-совместимый аппарат можно подсоединить с помощью одного кабеля i.LINK. Возможные применения этой функции охватывают операции и передачи данных с разными цифровыми аудиовидеоаппаратами. Если к данному аппарату подсоединены два или более i.LINK-совместимых аппарата в последовательной цепи, то возможны операции и передачи данных не только с подсоединенным аппаратом, но и с другими аппаратами через непосредственно подсоединенный аппарат. Однако имейте в виду, что метод управления иногда отличается в зависимости от характеристики и технических данных подсоединяемого аппарата с двумя или более гнездами i.LINK (гнезда DV), и что операции и передачи данных иногда невозможны на некоторых подсоединяемых аппаратах.

Примечание

Обычно, только один аппарат можно подсоединить к данному аппарату с помощью кабеля i.LINK (цифрового кабеля DV). При подсоединении данного аппарата к двум или более i.LINK-совместимым аппаратам изучите руководство по эксплуатации соответствующего подсоединяемого аппарата.

Относительно названия "i.LINK"

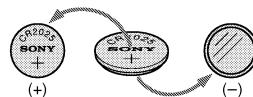
i.LINK является более привычным термином для связи передачи данных IEEE 1394, предложенной фирмой SONY, и он является фирменным знаком, утвержденным многими корпорациями.

IEEE 1394 является международным стандартом, утвержденным Институтом инженеров по электротехнике и электронике.

Замена литиевой батарейки в Вашей видеокамере

При замене литиевой батарейки батарейный блок или другой источник питания должен быть прикреплен к видеокамере. В противном случае Вам понадобятся переустанавливать дату, время и другие пункты в установках меню, хранимых в памяти видеокамеры с помощью литиевой батарейки.

Вставьте батарейку так, чтобы положительный (+) полюс был обращен наружу. Если батарейка станет или разрядится, индикатор  будет мигать на экране ЖКД или в видискателе около 5 секунд, если переключатель POWER установлен в положение CAMERA или MEMORY. В этом случае, **замените батарейку на литиевую батарейку Sony CR2025. Использование какой-либо другой батарейки может представлять риск воспламенения или взрыва. Ликвидируйте использованные батарейки в соответствии с инструкциями предприятия-изготовителя.**



WARNING

The battery may explode if mistreated. Do not recharge, disassemble, nor dispose of it in fire.

Lithium battery

- Keep the lithium battery out of the reach of children.
- Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to ensure good contact.

Lithium battery installed at the factory

This battery may not last 1 year.

ВНИМАНИЕ

Если с батарейкой неправильно обращаться, она может взорваться. Не перезаряжайте, не разбирайте и не бросайте в огонь батарейку.

Литиевая батарейка

- Храните литиевую батарейку в месте, не доступном для детей.
- В случае, если кто-либо случайно проглотит батарейку, следует немедленно обратиться к врачу.
- Протрите батарейку сухой тканью для обеспечения хорошего контакта.

Литиевая батарейка, установленная на заводе
Этой батарейкой может не хватить на 1 год.

About i.LINK

i.LINK Baud rate

i.LINK's maximum baud rate varies according to the equipment. Three maximum baud rates are defined:

S100 (approx. 100Mbps*)
S200 (approx. 200Mbps)
S400 (approx. 400Mbps)

The baud rate is listed under "Specifications" in the instruction manual of each equipment. It is also indicated near the i.LINK jack on some equipment.

The maximum baud rate of equipment on which it is not indicated such as this unit is "S100". When units are connected to equipment having a different maximum baud rate, the baud rate sometimes differs from the indicated baud rate.

* What is "Mbps"?

Mbps stands for megabits per second, or the amount of data that can be sent or received in one second. For example, a baud rate of 100Mbps means that 100 megabits of data can be sent in one second.

i.LINK Functions on this unit

For details on how to dub when this unit is connected to other video equipment having DV jacks, see page 75. This unit can also be connected to other i.LINK (DV) compatible equipment made by SONY (e.g. VAO series personal computer) other than video equipment.

Before connecting this unit to a personal computer, make sure that application software supported by this unit is already installed on the personal computer.

For details on precautions when connecting this unit, also refer to the instruction manuals for the equipment to be connected.

Required i.LINK Cable

Use the Sony i.LINK 4-pin-to-4-pin cable (during DV dubbing).

i.LINK and  are trademarks.

Относительно i.LINK

Скорость передачи i.LINK

Максимальная скорость передачи i.LINK изменяется в зависимости от аппарата. Имеются три максимальные скорости передачи:

S100 (приблиз. 100 Мбит/с*)
S200 (приблиз. 200 Мбит/с)
S400 (приблиз. 400 Мбит/с)

Скорость передачи указывается в разделе "Технические характеристики" в руководстве по эксплуатации каждого аппарата. На некоторых аппаратах она может быть также указана возле гнезда i.LINK. Максимальная скорость передачи аппарата, на котором она не указана, например, для данного аппарата, равна "S100". В случае, если аппараты подсоединяются к оборудованию с другой максимальной скоростью передачи, то скорость передачи иногда может отличаться от указанной скорости передачи.

* Что такое "Мбит/с"?

Мбит/с означает количество мегабит за секунду или количество данных, которое можно посылать или принимать за одну секунду. Например, скорость передачи 100 Мбит/с означает, что 100 мегабит данных может быть послано за одну секунду.

Функции i.LINK на данном аппарате

Подробные сведения о том, как выполнять перезапись, когда данный аппарат подсоединен к другому видеооборудованию с гнездами DV, см. на стр. 75. Данный аппарат может быть также подсоединен к другому i.LINK (DV)-совместимому оборудованию фирмы SONY (например, персональному компьютеру серии VAO), не относящемуся к видеоаппаратуре. Перед подсоединением данного аппарата к персональному компьютеру убедитесь, что на компьютере уже установлено программное приложение, поддерживаемое данным аппаратом. Подробные сведения относительно мер предосторожности при подсоединении данного аппарата приведены также в руководстве по эксплуатации для каждого подсоединяемого аппарата.


Требуемый кабель i.LINK

Используйте 4-штырьковый-к-4-штырьковому кабель i.LINK фирмы Sony (во время цифровой видеоперезаписи)

i.LINK и  являются фирменными знаками.

Changing the lithium battery in your camcorder

When replacing the lithium battery, keep the battery pack or other power source attached. Otherwise, you will need to reset the date, time and other items in the menu settings hold in memory by the lithium battery.

Insert the battery with the positive (+) side facing out. When the battery becomes weak or dead, the  indicator flashes on the LCD screen or in the viewfinder for about 5 seconds when you set the POWER switch to CAMERA or MEMORY. In this case, **replace the battery with a Sony CR2025 lithium battery. Use of any other battery may present a risk of fire or explosion.** Discard used batteries according to the manufacturer's instructions.

ВНИМАНИЕ

Если с батарейкой неправильно обращаться, она может взорваться. Не перезаряжайте, не разбирайте и не бросайте в огонь батарейку.

Литиевая батарейка

- Храните литиевую батарейку в месте, не доступном для детей.
- В случае, если кто-либо случайно проглотит батарейку, следует немедленно обратиться к врачу.
- Протрите батарейку сухой тканью для обеспечения хорошего контакта.

Литиевая батарейка, установленная на заводе
Этой батарейкой может не хватить на 1 год.

Changing the lithium battery in your camcorder

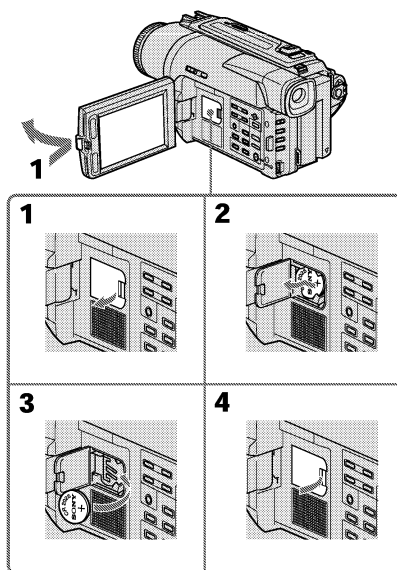
Changing the lithium battery

- (1) Open the LCD panel and open the lid of the lithium battery compartment.
- (2) Push the lithium battery in the direction of the arrow and pull it out from the holder.
- (3) Install a Sony CR2025 lithium battery with the positive (+) side facing out.
- (4) Close the lid.

Замена литиевой батарейки в Вашей видеокамере

Замена литиевой батарейки

- (1) Откройте панель ЖКД и откройте крышку отсека для литиевой батарейки.
- (2) Нажмите литиевую батарейку в направлении стрелки и выньте ее из держателя.
- (3) Установите литиевую батарейку Sony CR2025 так, чтобы положительный (+) полюс был обращен наружу.
- (4) Закройте крышку.



140

English

Troubleshooting

If you run into any problem using your camcorder, use the following table to troubleshoot the problem. If the problem persists, disconnect the power source and contact your Sony dealer or local authorized Sony service facility. If "C:□□□□" appears on the LCD screen, in the viewfinder or the display window, the self-diagnosis display function has worked. See page 146.

In the recording mode

| Symptom | Cause and/or Corrective Actions |
|--|--|
| START/STOP does not operate. | <ul style="list-style-type: none"> The POWER switch is set to OFF (CHARGE), VTR (DCR-TRV620E), PLAYER (DCR-TRV420E/TRV520E) or MEMORY. Set it to CAMERA. (p. 21) The tape has run out. Rewind the tape or insert a new one. (p. 19, 33) The write-protect tab is set to expose the red mark. Use a new tape or slide the tab. (p. 20) The tape is stuck to the drum (moisture condensation). Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 158) |
| The power goes off. | <ul style="list-style-type: none"> While being operated in CAMERA mode, your camcorder has been in the standby mode for more than 3 minutes. Set the POWER switch to OFF (CHARGE) and then to CAMERA again. (p. 21) |
| The image on the viewfinder screen is not clear. | <ul style="list-style-type: none"> The viewfinder lens is not adjusted. Adjust the viewfinder lens. (p. 25) |
| The SteadyShot function does not work. | <ul style="list-style-type: none"> STEADYSHOT is set to OFF in the menu settings. Set it to ON. (p. 85) |
| The autofocusing function does not work. | <ul style="list-style-type: none"> FOCUS is set to MANUAL. Set it to AUTO. (p. 57) Shooting conditions are not suitable for autofocus. Set FOCUS to MANUAL to focus manually. (p. 57) |
| The fader function does not work. | <ul style="list-style-type: none"> The digital effect function is working. Cancel it. (p. 53) |
| The picture does not appear in the viewfinder. | <ul style="list-style-type: none"> The LCD panel is open. Close the LCD panel. (p. 23) |
| You cannot record in the LP mode. | <ul style="list-style-type: none"> The tape is the standard 8 tape. Use Hi8 Hi8/Digital8 tapes. (p. 89) |
| A vertical band appears when you shoot a subject such as lights or a candle flame against a dark background. | <ul style="list-style-type: none"> The contrast between the subject and background is too high. This is not a malfunction. |
| A vertical band appears when you shoot a very bright subject. | <ul style="list-style-type: none"> This is not a malfunction. |

Additional Information

Дополнительная информация

(Continued on the following page) 141

Troubleshooting

| Symptom | Cause and/or Corrective Actions |
|---|--|
| Some tiny white spots appear on the LCD screen or in the viewfinder. | <ul style="list-style-type: none"> Slow shutter, low lux or Super NightShot mode is activated. This is not a malfunction. |
| An unknown picture is displayed on the LCD screen or in the viewfinder. | <ul style="list-style-type: none"> If 10 minutes elapse after you set the POWER switch to CAMERA or DEMO MODE is set to ON in the menu settings without a cassette inserted, your camcorder automatically starts the demonstration. Insert a cassette and the demonstration stops. You can also cancel DEMO MODE. (p. 90) |
| The picture is recorded in incorrect or unnatural colours. | <ul style="list-style-type: none"> NIGHTSHOT is set to ON. Set it to OFF. (p. 28) |
| Picture appears too bright, and the subject does not appear on the LCD screen or in the viewfinder. | <ul style="list-style-type: none"> NIGHTSHOT is set to ON in a bright place. Set it to OFF, or use the NightShot function in a dark place. (p. 28) |
| A horizontal black band appears when shooting a TV screen or computer screen. | <ul style="list-style-type: none"> Set STEADYSHOT to OFF in the menu settings (p. 85). |

In the playback mode

| Symptom | Cause and/or Corrective Actions |
|--|---|
| The tape does not move when a video control button is pressed. | <ul style="list-style-type: none"> The POWER switch is set to CAMERA, MEMORY or OFF (CHARGE). Set it to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E). (p. 33) |
| The playback button does not work. | <ul style="list-style-type: none"> The tape has run out. Rewind the tape. (p. 33) |
| There are horizontal lines on the picture or the playback picture is not clear or does not appear. | <ul style="list-style-type: none"> The video head may be dirty. Clean the heads using the Sony V8-25CLD cleaning cassette (not supplied). (p. 159) |
| No sound or only a low sound is heard when playing back a tape. | <ul style="list-style-type: none"> The stereo tape is played back with HiFi SOUND set to 2 in the menu settings. Set it to STEREO. (p. 85) The volume is turned to minimum. Open the LCD panel and press VOLUME +. (p. 33) AUDIO MIX is set to ST2 side in the menu settings. Adjust AUDIO MIX. (p. 85) |
| The date search does not work correctly. | <ul style="list-style-type: none"> The tape has a blank portion in the recorded portion (p. 69) |
| The picture which is recorded in the Digital8 system is not played back. | <ul style="list-style-type: none"> PB MODE is set to Hi8/Hi in the menu settings. Set it to AUTO. (p. 85) |
| The tape which is recorded in the Hi8/standard 8 system is not played back correctly. | <ul style="list-style-type: none"> Set PB MODE to Hi8/Hi in the menu settings. (p. 85) |

142

Troubleshooting

In the recording and playback modes

| Symptom | Cause and/or Corrective Actions |
|--|---|
| The power does not turn on. | <ul style="list-style-type: none"> The battery pack is not installed, or is dead or nearly dead. Install a charged battery pack. (p. 12, 13) The AC power adaptor is not connected to the mains. Connect the AC power adaptor to the mains. (p. 18) |
| The end search function does not work. | <ul style="list-style-type: none"> The tape was ejected after recording. |
| The end search function does not work correctly. | <ul style="list-style-type: none"> You have not recorded on the new cassette yet. The tape has a blank portion in the beginning or middle. |
| The battery pack is quickly discharged. | <ul style="list-style-type: none"> The operating temperature is too low. The battery pack is not fully charged. Charge the battery pack fully again. (p. 13) The battery pack is completely dead, and cannot be recharged. Replace with a new battery pack. (p. 12) |
| The battery remaining indicator does not indicate the correct time. | <ul style="list-style-type: none"> You have used the battery pack in an extremely hot or cold environment for a long time. The battery pack is completely dead, and cannot be recharged. Replace with a new battery pack. (p. 12) The battery is dead. Use a charged battery pack. (p. 12, 13) |
| The power goes off although the battery remaining indicator indicates that the battery pack has enough power to operate. | <ul style="list-style-type: none"> Charge the battery pack fully again so that the indication on the battery remaining indicator is correct. |
| The cassette cannot be removed from the holder. | <ul style="list-style-type: none"> The power source is disconnected. Connect it firmly. (p. 13, 18) The battery is dead. Use a charged battery pack. (p. 12, 13) |
| The [] and [] indicators flash and no functions except for cassette ejection work. | <ul style="list-style-type: none"> Moisture condensation has occurred. Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 158) |

Additional Information

Дополнительная информация

(Continued on the following page) 143

Troubleshooting

When operating using the "Memory Stick"

| Symptom | Cause and/or Corrective Actions |
|---|--|
| The "Memory Stick" does not function. | <ul style="list-style-type: none">• The POWER switch is set to CAMERA or OFF (CHARGE)<ul style="list-style-type: none">→ Set it to MEMORY. (p. 103)• "Memory Stick" is not inserted.<ul style="list-style-type: none">→ Insert a "Memory Stick". (p. 102) |
| Recording does not function. | <ul style="list-style-type: none">• The "Memory Stick" has already been recorded to its full capacity.<ul style="list-style-type: none">→ Erase unnecessary images and record again. (p. 130, 105)• The "Memory Stick" formatted incorrectly is inserted.<ul style="list-style-type: none">→ Format the "Memory Stick" on your camcorder or use another "Memory Stick." (p. 94)• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100) |
| The image cannot be deleted. | <ul style="list-style-type: none">• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100)• The image is protected.<ul style="list-style-type: none">→ Cancel image protection. (p. 128) |
| You cannot format the "Memory Stick". | <ul style="list-style-type: none">• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100) |
| Deleting all the images cannot be carried out. | <ul style="list-style-type: none">• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100) |
| You cannot protect the image. | <ul style="list-style-type: none">• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100)• The image to protect is not played back.<ul style="list-style-type: none">→ Press MEMORY PLAY to play back the image. (p. 119) |
| You cannot write a print mark on the still image. | <ul style="list-style-type: none">• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100)• The image to write a print mark is not played back.<ul style="list-style-type: none">→ Press MEMORY PLAY to play back the image. (p. 119) |
| The photo save function does not work. | <ul style="list-style-type: none">• The write-protect tab on the "Memory Stick" is set to LOCK.<ul style="list-style-type: none">→ Release the lock. (p. 100) |

Troubleshooting

Others

| Symptom | Cause and/or Corrective Actions |
|---|---|
| The Remote Commander supplied with your camcorder does not work. | <ul style="list-style-type: none">• COMMANDER is set to OFF in the menu settings.<ul style="list-style-type: none">→ Set it to ON. (p. 85)• Something is blocking the infrared rays.<ul style="list-style-type: none">→ Remove the obstacle.• The batteries are inserted in the battery holder with the + - polarities incorrectly matching the + - marks.<ul style="list-style-type: none">→ Insert the batteries with the correct polarity. (p. 171)• The batteries are dead.<ul style="list-style-type: none">→ Insert new ones. (p. 171) |
| The picture from a TV or VCR does not appear even when your camcorder is connected to outputs on the TV or VCR. | <ul style="list-style-type: none">• DISPLAY is set to V-OUT/LCD in the menu settings.<ul style="list-style-type: none">→ Set it to LCD. (p. 85) |
| The melody or beep sounds for 5 seconds. | <ul style="list-style-type: none">• Moisture condensation has occurred.<ul style="list-style-type: none">→ Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 158)• Some troubles have occurred in your camcorder.<ul style="list-style-type: none">→ Remove the cassette and insert it again, then operate your camcorder. |
| While charging the battery pack, no indicator appears or the indicator flashes in the display window. | <ul style="list-style-type: none">• The AC power adaptor is disconnected.<ul style="list-style-type: none">→ Connect it firmly. (p. 18)• Something is wrong with the battery pack.<ul style="list-style-type: none">→ Contact your Sony dealer or local authorized Sony service facility. |

Additional Information

Дополнительная информация

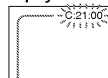
144

English

Self-diagnosis display

Your camcorder has a self-diagnosis display function. This function displays the current condition of your camcorder as a 5-digit code (a combination of a letter and figures) on the LCD screen, in the viewfinder or in the display window. If a 5-digit code is displayed, check the following code chart. The last two digits (indicated by □□) will differ depending on the state of your camcorder.

LCD screen, viewfinder or display window



Self-diagnosis display

- C:□□□□
You can service your camcorder yourself.
- E:□□□□
Contact your Sony dealer or local authorized Sony facility.

| Five-digit display | Cause and/or Corrective Actions |
|--------------------|---|
| C:04:□□ | <ul style="list-style-type: none">• You are using a battery pack that is not an "InfoLITHIUM" battery pack.<ul style="list-style-type: none">→ Use an "InfoLITHIUM" battery pack. (p. 17) |
| C:21:□□ | <ul style="list-style-type: none">• Moisture condensation has occurred.<ul style="list-style-type: none">→ Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 158) |
| C:22:□□ | <ul style="list-style-type: none">• The video heads are dirty.<ul style="list-style-type: none">→ Clean the heads using the Sony V8-25CLD cleaning cassette (not supplied). (p. 159) |
| C:31:□□ C:32:□□ | <ul style="list-style-type: none">• A malfunction other than the above that you can service has occurred.<ul style="list-style-type: none">→ Remove the cassette and insert it again, then operate your camcorder.→ Disconnect the mains lead of the AC power adaptor or remove the battery pack. After reconnecting the power source, operate your camcorder. |
| E:61:□□ E:62:□□ | <ul style="list-style-type: none">• A malfunction that you cannot service has occurred.<ul style="list-style-type: none">→ Contact your Sony dealer or local authorized Sony service facility and inform them of the 5-digit code. (example: E:61:10) |

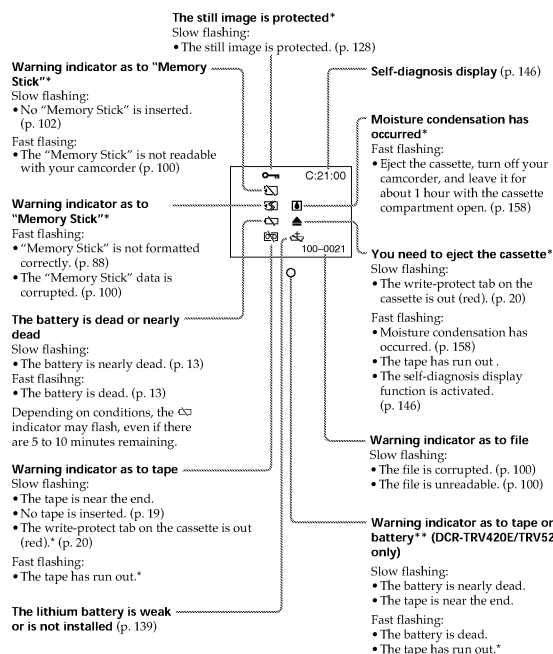
If you are unable to rectify the problem even if you try corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

English

Warning indicators and messages

If indicators and messages appear on the LCD screen, in the viewfinder or in the display window, check the following:
See the page in parentheses "()" for more information.

Warning indicators



Additional Information

Дополнительная информация

* You hear the melody or beep sound.
** This indicator appears in the viewfinder only.

146

147

Warning indicators and messages

Warning messages

| | |
|--|---|
| • CLOCK SET | Reset the date and time. (p. 98) |
| • FOR "InfoLITHIUM" BATTERY ONLY | Use an "InfoLITHIUM" battery pack. (p. 17) |
| • 8 mm TAPE → SP REC Hi8 TAPE → LP/SP REC | Use Hi8 Hi8/Digital 8 tapes when you record in the LP mode.* (p. 89) |
| • TAPE END | The tape has run out.* (p. 19) |
| • NO TAPE | Insert a cassette tape.* (p. 19) |
| • CLEANING CASSETTE** | The video heads are dirty. (p. 159) |
| • FULL | The "Memory Stick" is full.* (p. 107) |
| • LOCK | The write-protect tab on the "Memory Stick" is set to LOCK.* (p. 100) |
| • NO FILE | No still image is recorded on the "Memory Stick".* (p. 120) |
| • NO MEMORY STICK | No "Memory Stick" is inserted.* (p. 102) |
| • MEMORY STICK ERROR | The "Memory Stick" data is corrupted.* |
| • FORMAT ERROR | Check the type of formatting.* |
| • DIRECTORY ERROR | The "Memory Stick" has more than one directory such as 100msdcl.* |

* You hear the melody or beep sound.

** The  indicator and "CLEANING CASSETTE" message appear one after another on the LCD screen or in the viewfinder.

Using your camcorder abroad

Using your camcorder abroad

You can use your camcorder in any country or area with the AC power adaptor supplied with your camcorder within 100 V to 240 V AC, 50/60 Hz.

Your camcorder is a PAL system based camcorder. If you want to view the playback picture on a TV, it must be a PAL system based TV with VIDEO/AUDIO input jack. The following shows TV colour systems used overseas.

PAL system

Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, etc.

PAL-M system

Brazil

PAL-N system

Argentina, Paraguay, Uruguay

NTSC system

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

SECAM system

Bulgaria, France, Guyana, Hungary, Iran, Iraq, Monaco, Poland, Russia, Ukraine, etc.

Simple setting of clock by time difference

You can easily set the clock to the local time by setting a time difference. Select WORLD TIME in the menu settings. See page 85 for more information.

Использование Вашей видеокамеры за границей

Использование Вашей видеокамеры за границей

Вы можете использовать Вашу видеокамеру в любой стране или области с помощью сетевого адаптера переменного тока, прилагаемого к Вашей видеокамере, который можно использовать в пределах от 100 В до 240 В переменного тока с частотой 50/60 Гц.

Ваша видеокамера основана на системе PAL. Если Вы хотите просмотреть воспроизводимое изображение на телевизоре, то это должен быть телевизор, основанный на системе PAL, с входными гнездами VIDEO/AUDIO. Ниже приведены системы цветного телевидения, используемые за рубежом.

Система PAL

Австралия, Австрия, Бельгия, Великобритания, Германия, Голландия, Гонконг, Дания, Испания, Италия, Китай, Кувейт, Малайзия, Новая Зеландия, Норвегия, Португалия, Сингапур, Словацкая Республика, Таиланд, Финляндия, Чешская Республика, Швейцария, Швеция и т.д.

Система PAL-M

Бразилия

Система PAL-N

Аргентина, Парагвай, Уругвай

Система NTSC

Багамские острова, Боливия, Венесуэла, Канада, Колумбия, Корея, Мексика, Перу, Суринам, США, Тайвань, Филиппины, Центральная Америка, Чили, Эквадор, Ямайка, Япония и т.д.

Система SECAM

Болгария, Венгрия, Гвизана, Ирак, Иран, Монako, Польша, Россия, Украина, Франция и т.д.



Простая установка разницы во времени на часах

Вы можете легко установить часы на местное время путем установки разницы во времени. Выберите команду WORLD TIME в установках меню. Подробные сведения приведены на стр. 85.


148

Maintenance information and precautions

Moisture condensation

If your camcorder is brought directly from a cold place to a warm place, moisture may condense inside your camcorder, on the surface of the tape, or on the lens. In this condition, the tape may stick to the head drum and be damaged or your camcorder may not operate correctly. If there is moisture inside your camcorder, the beep sounds and the  indicator flashes. When the  indicator flashes at the same time, the cassette is inserted in your camcorder. If moisture condenses on the lens, the indicator will not appear.

If moisture condensation occurred

None of the functions except cassette ejection will work. Eject the cassette, turn off your camcorder, and leave it for about 1 hour with the cassette compartment open. Your camcorder can be used again if the  indicator does not appear when the power is turned on again.

Note on moisture condensation

Moisture may condense when you bring your camcorder from a cold place into a warm place (or vice versa) or when you use your camcorder in a hot place as follows:


- You bring your camcorder from a ski slope into a place warmed up by a heating device.
- You bring your camcorder from an air-conditioned car or room into a hot place outside.
- You use your camcorder after a squall or a shower.
- You use your camcorder in a high temperature and humidity place.


How to prevent moisture condensation

When you bring your camcorder from a cold place into a warm place, put your camcorder in a plastic bag and tightly seal it. Remove the bag when the air temperature inside the plastic bag has reached the surrounding temperature (after about 1 hour).

Информация по уходу за аппаратом и меры предосторожности

Конденсация влаги

Если видеокамера принесена прямо из холодного места в теплое, то внутри видеокамеры, на поверхности ленты или на объективе может произойти конденсация влаги. В таком состоянии лента может прилипнуть к барабану головки и будет повреждена или же видеокамера не сможет работать надлежащим образом. Если внутри видеокамеры произошла конденсация влаги, то прозвучит зуммерный сигнал, а на экране ЖКД будет мигать индикатор . Если в то же самое время будет мигать индикатор , это значит, что в видеокамеру вставлена кассета. Если влага сконденсировалась на объективе, индикатор появляться не будет.

Если произошла конденсация влаги
Ни одна из функций, кроме выталкивания кассеты, не будет работать. Извлеките кассету, выключите видеокамеру и оставьте ее приблизительно на 1 час с открытым кассетным отсеком. Если при повторном включении питания индикатор  не появится на дисплее, Вы можете снова пользоваться видеокамерой.

Примечание по конденсации влаги

Влага может образоваться, если Вы принесете Вашу видеокамеру из холодного места в теплое (или наоборот) или когда Вы используете Вашу видеокамеру в жарком месте в следующих случаях:
- Вы принесли Вашу видеокамеру с лыжного склона в помещение, где функционирует обогреватель.
- Вы принесли Вашу видеокамеру из автомобиля или из комнаты с воздушным кондиционированием в жаркое место на улице.
- Вы используете видеокамеру после грозы или дождя.
- Вы используете Вашу видеокамеру в очень жарком и влажном месте.

Как предотвратить конденсацию влаги
Если видеокамера принесена из холодного места в теплое, то положите видеокамеру в полиэтиленовый пакет и плотно закройте его. Выньте видеокамеру из полиэтиленового пакета, когда температура воздуха внутри пакета достигнет температуры окружающего воздуха (приблизительно через 1 час).

Maintenance information and precautions

Maintenance information


Cleaning the LCD screen

If fingerprints or dust make the LCD screen dirty, we recommend using a LCD Cleaning Kit (not supplied) to clean the LCD screen.

Cleaning the video head

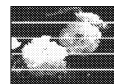
To ensure normal recording and clear pictures, clean the video heads.

When you playback/record in the Digital 8 system

The video head may be dirty when:
- mosaic-pattern noise appears on the playback picture.
- playback pictures do not move.
- playback pictures are hardly visible.
- playback pictures do not appear.
- the  indicator and "CLEANING CASSETTE" message appear one after another on the LCD screen or in the viewfinder.



от / или



When you play back in the Hi8/Standard 8 (analog) system

The video head may be dirty when:
- playback pictures contain noise.
- playback pictures are hardly visible.
- playback pictures do not appear.



от / или



If the above problems occur, clean the video heads with the Sony V8-25CLD cleaning cassette (not supplied). Check the picture and if the above problems persists, repeat cleaning.

В случае возникновения указанных выше проблем, почистите видеоголовки с помощью очистительной кассеты Sony V8-25CLD (не прилагается). Проверьте изображение и, если описанные выше проблемы не устранились, повторите чистку.

158

157

Additional Information

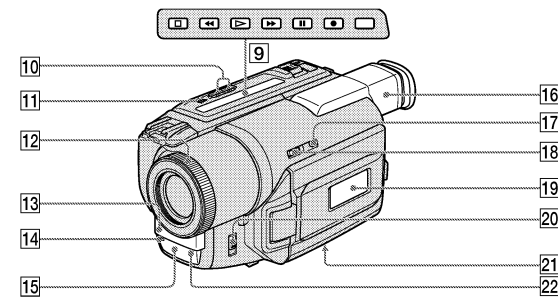
Дополнительная информация

Additional Information

Дополнительная информация

Identifying the parts and controls

Обозначение частей и регуляторов



- 9 Video control buttons (p. 33, 36)
- STOP (stop)
 - ◀ REW (rewind)
 - ▶ PLAY (playback)
 - ▶▶ FF (fastforward)
 - ⏸ PAUSE (pause)
 - REC (recording) (DCR-TRV620E only)
- The control buttons light up when you set the POWER switch to VTR (DCR-TRV620E) or PLAYER (DCR-TRV420E/TRV520E).
- 10 EDITSEARCH buttons (p. 31)
- 11 S. LASER LINK button (p. 40)
- 12 Focus ring (p. 57)
- 13 Microphone
- 14 Camera recording lamp (p. 21)
- 15 Infrared rays emitter (p. 28, 40)
- 16 Viewfinder (p. 25)
- 17 SUPER NIGHTSHOT button (p. 28)
- 18 NIGHTSHOT switch (p. 28)
- 19 Display window (p. 172)
- 20 FOCUS switch (p. 57)
- 21 Tripod receptacle (base)
- Make sure that the length of the tripod screw is less than 6.5 mm (9/32 inch). Otherwise, you cannot attach the tripod securely and the screw may damage your camcorder.
- 22 Remote sensor

What is SUPER LASER LINK?

The super laser link system sends and receives pictures and sound between video equipment having the super laser link mark by using infrared rays.

- 9 Кнопки видеоконтроля (стр. 33, 36)
- STOP (остановка)
 - ◀ REW (ускоренная перемотка назад)
 - ▶ PLAY (воспроизведение)
 - ▶▶ FF (ускоренная перемотка вперед)
 - ⏸ PAUSE (пауза)
 - REC (запись) (только DCR-TRV620E)
- Кнопки контроля высвечиваются при установке переключателя POWER в положение VTR (DCR-TRV620E) или PLAYER (DCR-TRV420E/TRV520E).
- 10 Кнопка EDITSEARCH (стр. 31)
- 11 Кнопка S.LASER LINK (стр. 40)
- 12 Кольцо фокусировки (стр. 57)
- 13 Микрофон
- 14 Лампа записи видеокамеры (стр. 21)
- 15 Излучатель инфракрасных лучей (стр. 28, 40)
- 16 Видоискатель (стр. 25)
- 17 Кнопка SUPER NIGHTSHOT (стр. 28)
- 18 Переключатель NIGHTSHOT (стр. 28)
- 19 Окошко дисплея (стр. 172)
- 20 Переключатель FOCUS (стр. 57)
- 21 Гнездо для треноги (основание)
- Убедитесь, что длина винта треноги менее 6,5 мм. В противном случае Вы не сможете надежно прикрепить треногу, а винт может повредить Вашу видеокамеру.
- 22 Датчик дистанционного управления

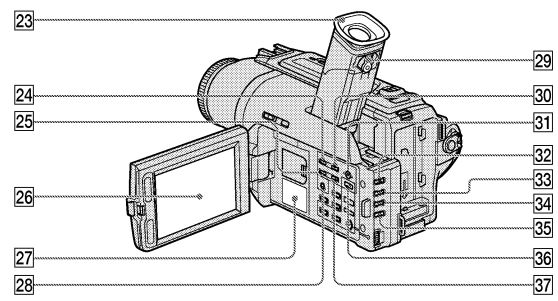
Что такое SUPER LASER LINK?

Система лазерного суперканала передачи сигналов посылает и принимает изображения и звук между видеоаппаратурой , имеющей знак лазерного суперканала передачи сигналов, с помощью инфракрасных лучей.

166

Identifying the parts and controls

Обозначение частей и регуляторов



- 23 Eyecup
- 24 MEMORY PLAY button (p. 119)
- 25 MEMORY - button (p. 111, 119)
- 26 LCD screen (p. 23)
- 27 Speaker
- 28 (self-timer) button (p. 30)
- 29 Viewfinder lens adjustment lever (p. 25)
- 30 MEMORY INDEX button (p. 121)
- 31 MEMORY DELETE button (p. 130)
- 32 FADER button (p. 47)
- 33 BACK LIGHT button (p. 27)
- 34 PROGRAM AE button (p. 55)
- 35 EXPOSURE button (p. 56)
- 36 MEMORY MIX button (p. 111)
- 37 MEMORY + button (p. 111, 119)

Attaching the shoulder strap

Attach the shoulder strap supplied with your camcorder to the hooks for the shoulder strap.



- 23 Окуляр
- 24 Кнопка MEMORY PLAY (стр. 119)
- 25 Кнопка MEMORY - (стр. 111, 119)
- 26 Экран ЖКД (стр. 23)
- 27 Динамик
- 28 Кнопка (таймер самозапуска) (стр. 30)
- 29 Рычаг регулировки объектива видоискателя (стр. 25)
- 30 Кнопка MEMORY INDEX (стр. 121)
- 31 Кнопка MEMORY DELETE (стр. 130)
- 32 Кнопка FADER (стр. 47)
- 33 Кнопка BACK LIGHT (стр. 27)
- 34 Кнопка PROGRAM AE (стр. 55)
- 35 Кнопка EXPOSURE (стр. 56)
- 36 Кнопка MEMORY MIX (стр. 111)
- 37 Кнопка MEMORY + (стр. 111, 119)

Прикрепление плечевого ремня

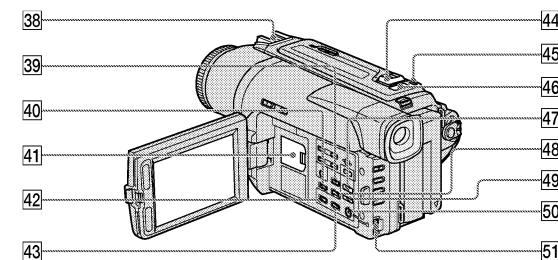
Прикрепите плечевой ремень, прилагаемый к Вашей видеокамере, к крючкам для плечевого ремня.

Quick Reference
Оперативный справочник

167

Identifying the parts and controls

Обозначение частей и регуляторов



- 38 Intelligent accessory shoe
- 39 DATA CODE button (p. 34)
- 40 DISPLAY button (p. 34)
- 41 Lithium battery compartment (p. 140)
- 42 PB ZOOM button (p. 66, 125)
- 43 TITLE button (p. 59)
- 44 Power Zoom lever (p. 24)
- 45 PHOTO button (p. 41, 105)
- 46 "Memory Stick" lamp
- This lamp lights up while "Memory Stick" is in the "Memory Stick" compartment.
- 47 DIGITAL EFFECT button (p. 52, 65)
- 48 END SEARCH button (p. 31)
- 49 PICTURE EFFECT button (p. 50, 64)
- 50 MENU button (p. 45, 85)
- 51 SEL/PUSH EXEC dial (p. 45, 85)

Intelligent Accessory Shoe

Notes on the intelligent accessory shoe

- The intelligent accessory shoe supplies power to optional accessories such as a video light or microphone.
- The intelligent accessory shoe is linked to the POWER switch, allowing you to turn the power supplied by the shoe on and off. Refer to the operating instructions of the accessory for further information.
- The intelligent accessory shoe has a safety device for fixing the installed accessory securely. To connect an accessory, press down and push it to the end, and then tighten the screw.
- To remove an accessory, loosen the screw, and then press down and pull out the accessory.

- 38 Держатель для установки принадлежностей
- 39 Кнопка DATA CODE (стр. 34)
- 40 Кнопка DISPLAY (стр. 34)
- 41 Отсек литиевой батарейки (стр. 140)
- 42 Кнопка PB ZOOM (стр. 66, 125)
- 43 Кнопка TITLE (стр. 59)
- 44 Рычаг приводного вариообъектива (стр. 24)
- 45 Кнопка PHOTO (стр. 41, 105)
- 46 Лампочка "Memory Stick"
- Эта лампочка высвечивается в то время, когда "Memory Stick" вставлена в отсек "Memory Stick".
- 47 Кнопка DIGITAL EFFECT (стр. 52, 65)
- 48 Кнопка END SEARCH (стр. 31)
- 49 Кнопка PICTURE EFFECT (стр. 50, 64)
- 50 Кнопка MENU (стр. 45, 85)
- 51 Диск SEL/PUSH EXEC (стр. 45, 85)

Intelligent Accessory Shoe

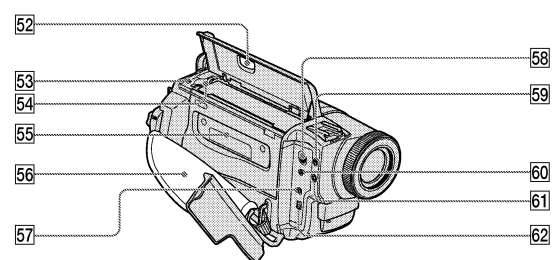
Примечания относительно держателя для установки принадлежностей

- Держатель для установки принадлежностей подает питание на вспомогательные принадлежности, такие как видеоподсветка или микрофон.
- Держатель для установки принадлежностей связан с переключателем POWER, позволяя Вам включать и выключать подаваемое через держатель питание. Подробные сведения приведены в инструкции по эксплуатации вспомогательных принадлежностей.
- В держателе для установки вспомогательных принадлежностей имеется предохранительное устройство для надежной фиксации установленной принадлежности. Для подсоединения принадлежности нажмите ее вниз и нажмите до упора, а затем затяните винт.
- Для снятия принадлежности ослабьте винт, а затем нажмите принадлежность вниз и потяните ее.

168

Identifying the parts and controls

Обозначение частей и регуляторов



- 52 EJECT button (p. 19)
- 53 Access lamp (p. 102)
- 54 "Memory Stick" compartment (p. 102)
- 55 Cassette compartment (p. 19)
- 56 Grip strap
- 57 LANC DIGITAL I/O jack
- LANC stands for Local Application Control Bus System. The LANC control jack is used for controlling the tape transport of video equipment and other peripherals connected to the video equipment. This jack has the same function as the jack indicated as CONTROL L or REMOTE.
- 58 S VIDEO jack (p. 38)
- 59 (headphones) jack
- 60 AUDIO/VIDEO jack (p. 38, 44, 73, 116)
- 61 MIC (PLUG IN POWER) jack
- Connect an external microphone (not supplied). This jack also accepts a "plug-in-power" microphone.
- 62 DV IN/OUT or DV OUT jack (p. 75, 116)
- The DV IN/OUT or DV OUT jack is i.LINK compatible.

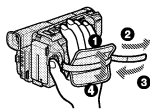
- 52 Кнопка EJECT (стр. 19)
- 53 Лампочка доступа (стр. 102)
- 54 Отсек "Memory Stick" (стр. 102)
- 55 Кассетный отсек (стр. 19)
- 56 Ремень для захвата
- 57 Гнездо LANC DIGITAL I/O
- LANC означает систему канала местного управления. Гнездо управления LANC используется для контроля за перемещением ленты видеоаппаратуры и периферийных устройств, подключенных к ней. Данное гнездо имеет такую же функцию, как и разъемы, обозначенные как CONTROL L или REMOTE.
- 58 Гнездо S VIDEO (стр. 38)
- 59 Гнездо (головные телефоны)
- 60 Гнездо AUDIO/VIDEO (стр. 38, 44, 73, 116)
- 61 Гнездо MIC (PLUG IN POWER)
- Для подсоединения внешнего микрофона (не прилагается). Это гнездо также позволяет подключить микрофон "с выключателем питания".
- 62 Гнездо DV IN/OUT или DV OUT (стр. 75, 116)
- Гнездо DV IN/OUT или DV OUT совместимо с каналом передачи сигналов i.LINK.

Quick Reference
Оперативный справочник

169

Identifying the parts and controls

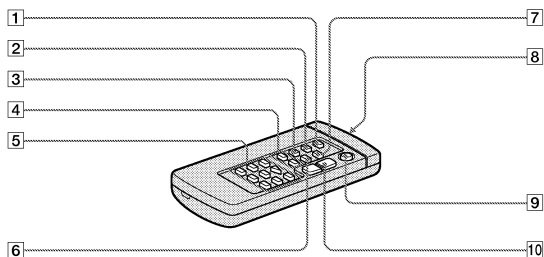
Fastening the grip strap



Fasten the grip strap firmly.

Remote Commander

The buttons that have the same name on the Remote Commander as on your camcorder function identically to the buttons on your camcorder.



- | | |
|---|--|
| 1 PHOTO button (p. 41, 105) | 7 Кнопка PHOTO (стр. 41, 105) |
| 2 DISPLAY button (p. 34) | 8 Кнопка DISPLAY (стр. 34) |
| 3 SEARCH MODE button (p. 69, 71) | 9 Кнопка SEARCH MODE (стр. 69, 71) |
| 4 << >> buttons (p. 68, 71) | 10 Кнопки << >> (стр. 68, 71) |
| 5 Tape transport buttons (p. 36) | 11 Кнопки перемещения ленты (стр. 36) |
| 6 DATA CODE button (p. 34) | 12 Кнопка DATA CODE (стр. 34) |
| 7 ZERO SET MEMORY button (p. 63, 68) | 13 Кнопка ZERO SET MEMORY (стр. 63, 68) |
| 8 Transmitter | 14 Передатчик |
| Point toward the remote sensor to control the camcorder after turning on the camcorder. | Направьте на датчик для управления видеосъемкой после включения видеосъемки. |
| 9 START/STOP button (p. 21) | 15 Кнопка START/STOP (стр. 21) |
| 10 Power zoom button (p. 24) | 16 Кнопка приводного вариообъектива (стр. 24) |

Обозначение частей и регуляторов

Пристегивание ремня для захвата

Пристегните ремень для захвата плотно.

Пульт дистанционного управления

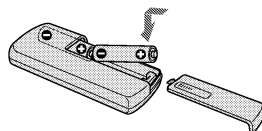
Кнопки пульта дистанционного управления, которые имеют одинаковые наименования с кнопками на видеокамере, функционируют идентично.

Identifying the parts and controls

To prepare the Remote Commander
Insert 2 R6 (size AA) batteries by matching the + and - polarities on the batteries to the + - marks inside the battery compartment.

Обозначение частей и регуляторов

Для подготовки пульта дистанционного управления
Вставьте две батарейки R6 (размера AA), соблюдая надлежащую полярность + и - на батарейках со знаками + - внутри отсека для батареек.



Notes on the Remote Commander

- Point the remote sensor away from strong light sources such as direct sunlight or overhead lighting. Otherwise, the Remote Commander may not function properly.
- Your camcorder works in the Commander mode VTR 2. Commander modes 1, 2 and 3 are used to distinguish your camcorder from other Sony VCRs to avoid remote control misoperation. If you use another Sony VCR in the Commander mode VTR 2, we recommend changing the Commander mode or covering the sensor of the VCR with black paper.

Примечания к пульту дистанционного управления

- Держите дистанционный датчик подальше от сильных источников света, как например, прямые солнечные лучи или иллюминация. В противном случае дистанционное управление может не действовать.
- Данная видеокамера работает в режиме пульта дистанционного управления VTR 2. Режимы пульта дистанционного управления 1, 2 и 3 используются для отличия данной видеокамеры от других KBM фирмы Sony во избежание неправильной работы дистанционного управления. Если Вы используете другой KBM фирмы Sony, работающий в режиме VTR 2, мы рекомендуем Вам изменить режим пульта дистанционного управления или закрыть дистанционный датчик KBM черной бумагой.

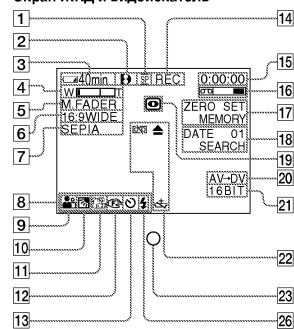
170

171

Identifying the parts and controls

Operation indicators

LCD screen and Viewfinder/Экран ЖКД и видоскоп

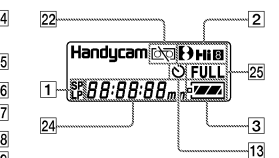


- | | |
|---|--|
| 1 Recording mode indicator (p. 22)/Mirror mode indicator (p. 23) | 14 Индикатор режима записи (стр. 22)/индикатор зеркального режима (стр. 23) |
| 2 Format indicator (p. 135) | 15 Индикатор формата (стр. 135) |
| 3 Remaining battery time indicator (p. 13, 26) | 16 Индикатор времени оставшегося заряда батарейного блока (стр. 13, 26) |
| 4 Zoom indicator (p. 24)/Exposure indicator (p. 56) | 17 Индикатор вариообъектива (стр. 24)/Индикатор экспозиции (стр. 56) |
| 5 Fader indicator (p. 47)/Digital effect indicator (p. 52, 65) | 18 Индикатор фейдера (стр. 47)/Индикатор цифрового эффекта (стр. 52, 65) |
| 6 Wide mode indicator (p. 45)/FRAME indicator (p. 88) | 19 Индикатор широкоформатного режима (стр. 45)/Индикатор FRAME (стр. 88) |
| 7 Picture effect indicator (p. 50, 64) | 20 Индикатор эффекта изображения (стр. 50, 64) |
| 8 LCD bright indicator (p. 23)/Volume indicator (p. 33)/Data code indicator (p. 35) | 21 Индикатор яркости ЖКД (стр. 23)/индикатор громкости (стр. 33)/индикатор кода данных (стр. 35) |
| 9 PROGRAM AE indicator (p. 54) | 22 Индикатор PROGRAM AE (стр. 54) |
| 10 Backlight indicator (p. 27) | 23 Индикатор задней подсветки (стр. 27) |
| 11 SteadyShot off indicator (p. 86) | 24 Индикатор выключенной функции устойчивой съемки (стр. 86) |
| 12 Manual focusing indicator (p. 57) | 25 Индикатор ручной фокусировки (стр. 57) |
| 13 Self-timer indicator (p. 30, 43) | 26 Индикатор таймера самозапуска (стр. 30, 43) |

Обозначение частей и регуляторов

Функциональные индикаторы

Display window/Окношко дисплея



- | | |
|---|--|
| 1 Индикатор режима записи (стр. 22)/индикатор зеркального режима (стр. 23) | 14 Индикатор формата (стр. 135) |
| 2 Индикатор времени оставшегося заряда батарейного блока (стр. 13, 26) | 15 Индикатор вариообъектива (стр. 24)/Индикатор экспозиции (стр. 56) |
| 3 Индикатор экспозиции (стр. 56) | 16 Индикатор цифрового эффекта (стр. 52, 65) |
| 4 Индикатор вариообъектива (стр. 24)/Индикатор экспозиции (стр. 56) | 17 Индикатор широкоформатного режима (стр. 45)/Индикатор FRAME (стр. 88) |
| 5 Индикатор экспозиции (стр. 56) | 18 Индикатор эффекта изображения (стр. 50, 64) |
| 6 Индикатор широкоформатного режима (стр. 45)/Индикатор FRAME (стр. 88) | 19 Индикатор яркости ЖКД (стр. 23)/индикатор громкости (стр. 33)/индикатор кода данных (стр. 35) |
| 7 Индикатор эффекта изображения (стр. 50, 64) | 20 Индикатор PROGRAM AE (стр. 54) |
| 8 Индикатор яркости ЖКД (стр. 23)/индикатор громкости (стр. 33)/индикатор кода данных (стр. 35) | 21 Индикатор задней подсветки (стр. 27) |
| 9 Индикатор PROGRAM AE (стр. 54) | 22 Индикатор выключенной функции устойчивой съемки (стр. 86) |
| 10 Индикатор задней подсветки (стр. 27) | 23 Индикатор ручной фокусировки (стр. 57) |
| 11 Индикатор выключенной функции устойчивой съемки (стр. 86) | 24 Индикатор таймера самозапуска (стр. 30, 43) |
| 12 Индикатор ручной фокусировки (стр. 57) | |
| 13 Индикатор таймера самозапуска (стр. 30, 43) | |

Identifying the parts and controls

- | | |
|---|--|
| 14 STBY/REC indicator (p. 21)/Video control mode (p. 36) | 15 Индикатор STBY/REC (стр. 21)/режим видеоконтроля (стр. 36) |
| 16 Tape counter indicator (p. 26, 63, 68)/Time code indicator (p. 146)/Self-diagnosis display indicator (p. 146)/Tape photo recording indicator (p. 41) | 17 Индикатор счетчика ленты (стр. 26, 63, 68)/индикатор кода времени (стр. 26)/индикатор функции самодиагностики (стр. 146)/индикатор фотосъемки на ленту (стр. 41) |
| 18 Remaining tape indicator (p. 26) | 18 Индикатор оставшейся ленты (стр. 26) |
| 19 ZERO SET MEMORY indicator (p. 63, 67) | 19 Индикатор ZERO SET MEMORY (стр. 63, 67) |
| 20 Search mode indicator (p. 31, 68, 71) | 20 Индикатор режима поиска (стр. 31, 68, 71) |
| 21 NIGHTSHOT indicator (p. 28) | 21 Индикатор NIGHTSHOT (стр. 28) |
| 22 A/V → DV indicator (DCR-TRV620E only) (p. 87)/DV IN indicator (p. 82) | 22 Индикатор A/V → DV (Только DCR-TRV620E) (стр. 87)/индикатор DV IN (стр. 82) |
| 23 Audio mode indicator (p. 89) | 23 Индикатор аудиорежима (стр. 89) |
| 24 Warning indicators (p. 147) | 24 Предупреждающие индикаторы (стр. 147) |
| 25 Recording lamp (DCR-TRV420E/TRV520E) (p. 21) | 25 Лампочка записи (DCR-TRV420E/TRV520E) (стр. 21) |
| This indicator appears in the viewfinder. | Этот индикатор появляется в видоскопеле. |
| 26 Tape counter indicator (p. 26, 63, 68)/Time code indicator (p. 146)/Remaining battery time indicator (p. 13, 26) | 26 Индикатор счетчика ленты (стр. 26, 63, 68)/индикатор кода времени (стр. 26)/индикатор функции самодиагностики (стр. 146)/индикатор времени оставшегося заряда батарейного блока (стр. 13, 26) |
| 27 FULL charge indicator (p. 13) | 27 Индикатор зарядки FULL (стр. 13) |
| 28 Video flash ready indicator | 28 Индикатор готовности видеосъемки |
| This indicator appears when you use the video flash light (not supplied). | Этот индикатор появляется при использовании видеосъемки (не прилагается). |

Обозначение частей и регуляторов

- | | |
|--|--|
| 14 Индикатор STBY/REC (стр. 21)/режим видеоконтроля (стр. 36) | 15 Индикатор счетчика ленты (стр. 26, 63, 68)/индикатор кода времени (стр. 26)/индикатор функции самодиагностики (стр. 146)/индикатор фотосъемки на ленту (стр. 41) |
| 16 Индикатор оставшейся ленты (стр. 26) | 16 Индикатор ZERO SET MEMORY (стр. 63, 67) |
| 17 Индикатор ZERO SET MEMORY (стр. 63, 67) | 17 Индикатор режима поиска (стр. 31, 68, 71) |
| 18 Индикатор оставшейся ленты (стр. 26) | 18 Индикатор NIGHTSHOT (стр. 28) |
| 19 Индикатор ZERO SET MEMORY (стр. 63, 67) | 19 Индикатор A/V → DV (Только DCR-TRV620E) (стр. 87)/индикатор DV IN (стр. 82) |
| 20 Индикатор режима поиска (стр. 31, 68, 71) | 20 Индикатор аудиорежима (стр. 89) |
| 21 Индикатор NIGHTSHOT (стр. 28) | 21 Предупреждающие индикаторы (стр. 147) |
| 22 Индикатор A/V → DV (Только DCR-TRV620E) (стр. 87)/индикатор DV IN (стр. 82) | 22 Лампочка записи (DCR-TRV420E/TRV520E) (стр. 21) |
| 23 Индикатор аудиорежима (стр. 89) | 23 Этот индикатор появляется в видоскопеле. |
| 24 Предупреждающие индикаторы (стр. 147) | 24 Индикатор счетчика ленты (стр. 26, 63, 68)/индикатор кода времени (стр. 26)/индикатор функции самодиагностики (стр. 146)/индикатор времени оставшегося заряда батарейного блока (стр. 13, 26) |
| 25 Лампочка записи (DCR-TRV420E/TRV520E) (стр. 21) | 25 Индикатор зарядки FULL (стр. 13) |
| Этот индикатор появляется в видоскопеле. | 26 Индикатор готовности видеосъемки |
| 26 Индикатор счетчика ленты (стр. 26, 63, 68)/индикатор кода времени (стр. 26)/индикатор функции самодиагностики (стр. 146)/индикатор времени оставшегося заряда батарейного блока (стр. 13, 26) | Этот индикатор появляется при использовании видеосъемки (не прилагается). |
| 27 Индикатор зарядки FULL (стр. 13) | |
| 28 Индикатор готовности видеосъемки | |
| Этот индикатор появляется при использовании видеосъемки (не прилагается). | |

172

173

DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 SECTION 2 TRV620E/TRV720/TRV720E DISASSEMBLY

- This set can be disassembled in the order shown below.

Note: 2.5 LCD model : DCR-TRV320/TRV320E/TRV320P

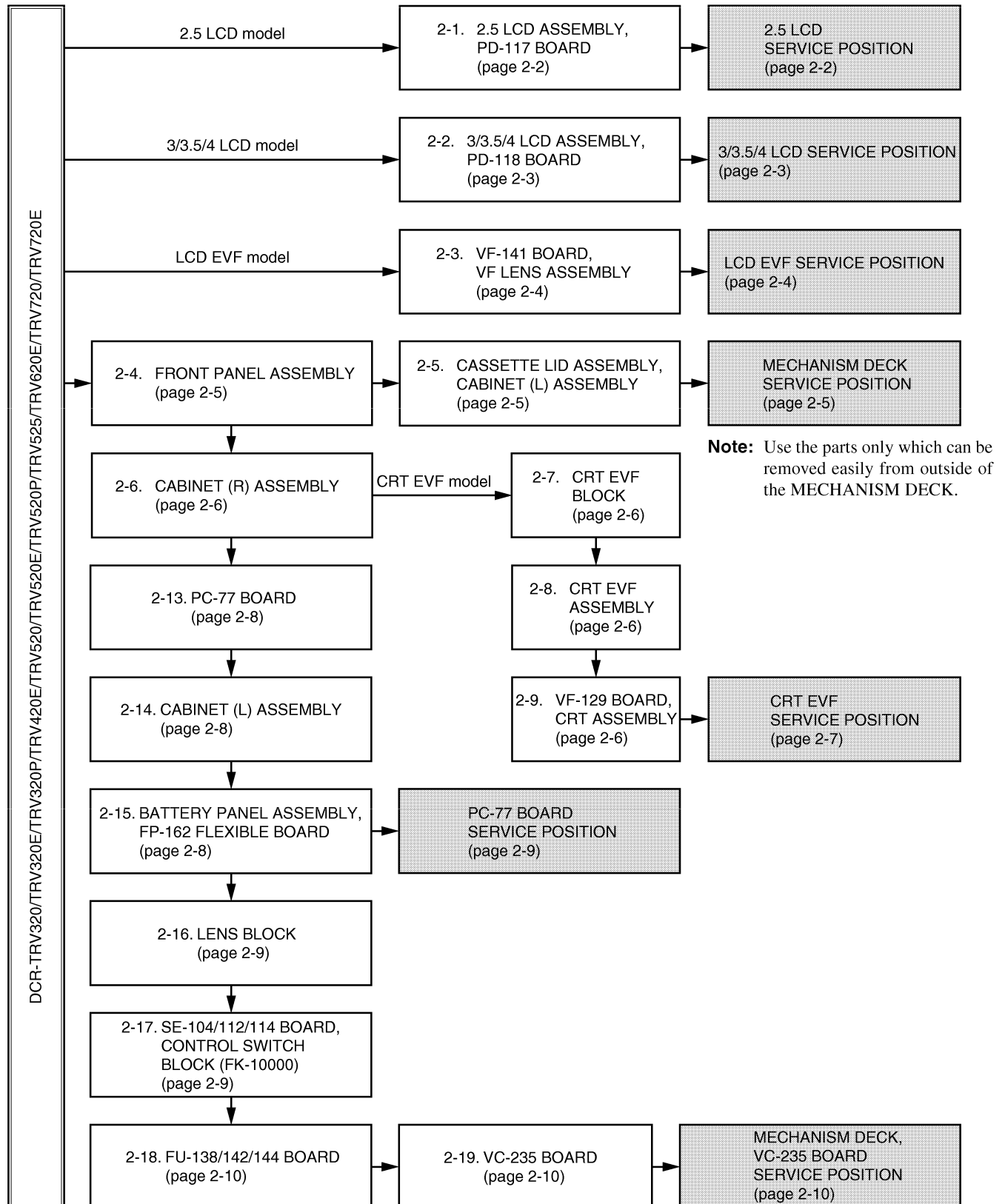
3 LCD model : DCR-TRV420E/TRV525

3.5 LCD model : DCR-TRV520/TRV520E/TRV520P/TRV620E

4 LCD model : DCR-TRV720/TRV720E

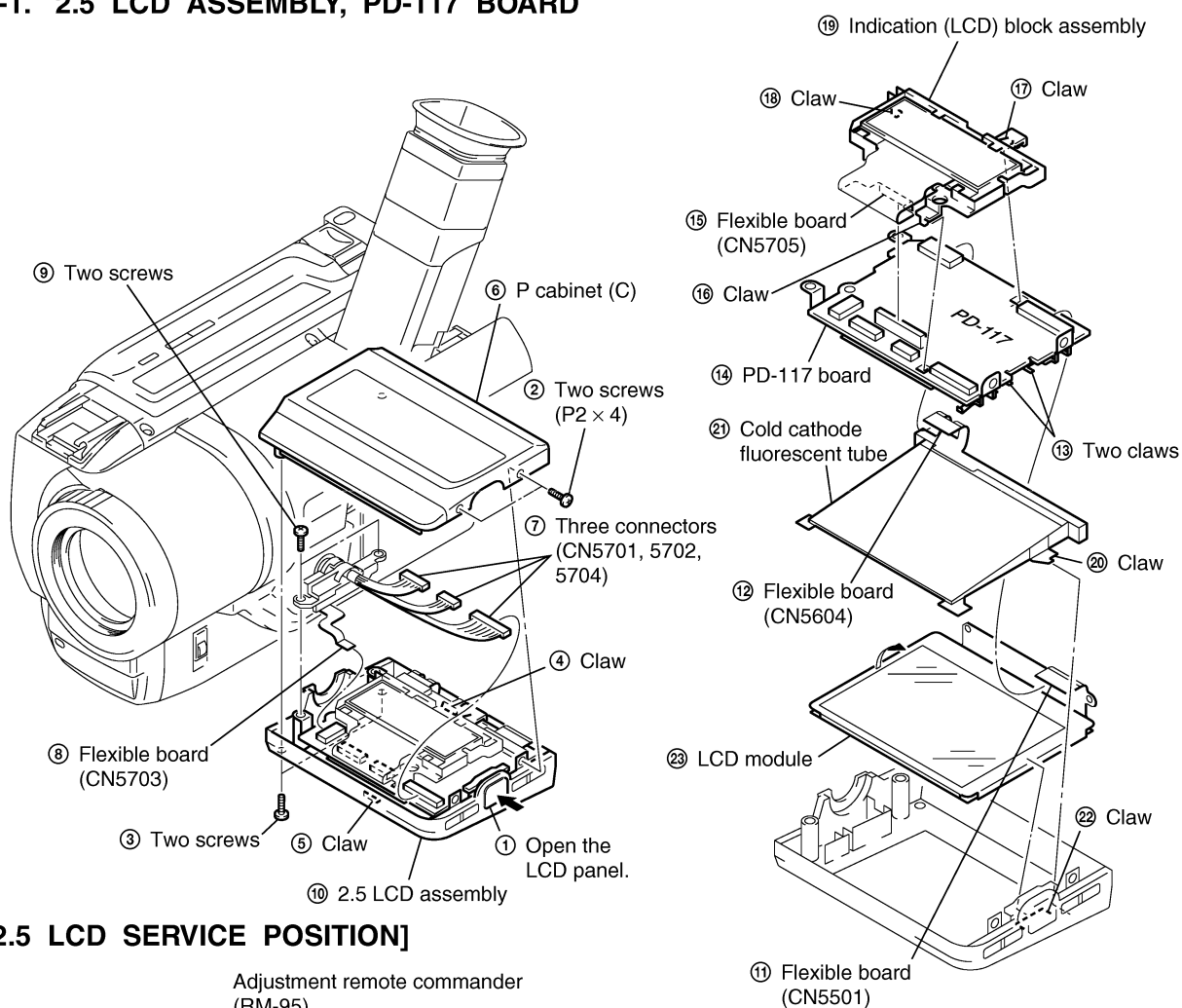
LCD EVF model: DCR-TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP/TRV525/TRV620E/TRV720/TRV720E

CRT EVF model : DCR-TRV320/TRV320E: E, HK, AUS, CN/TRV320P/TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P

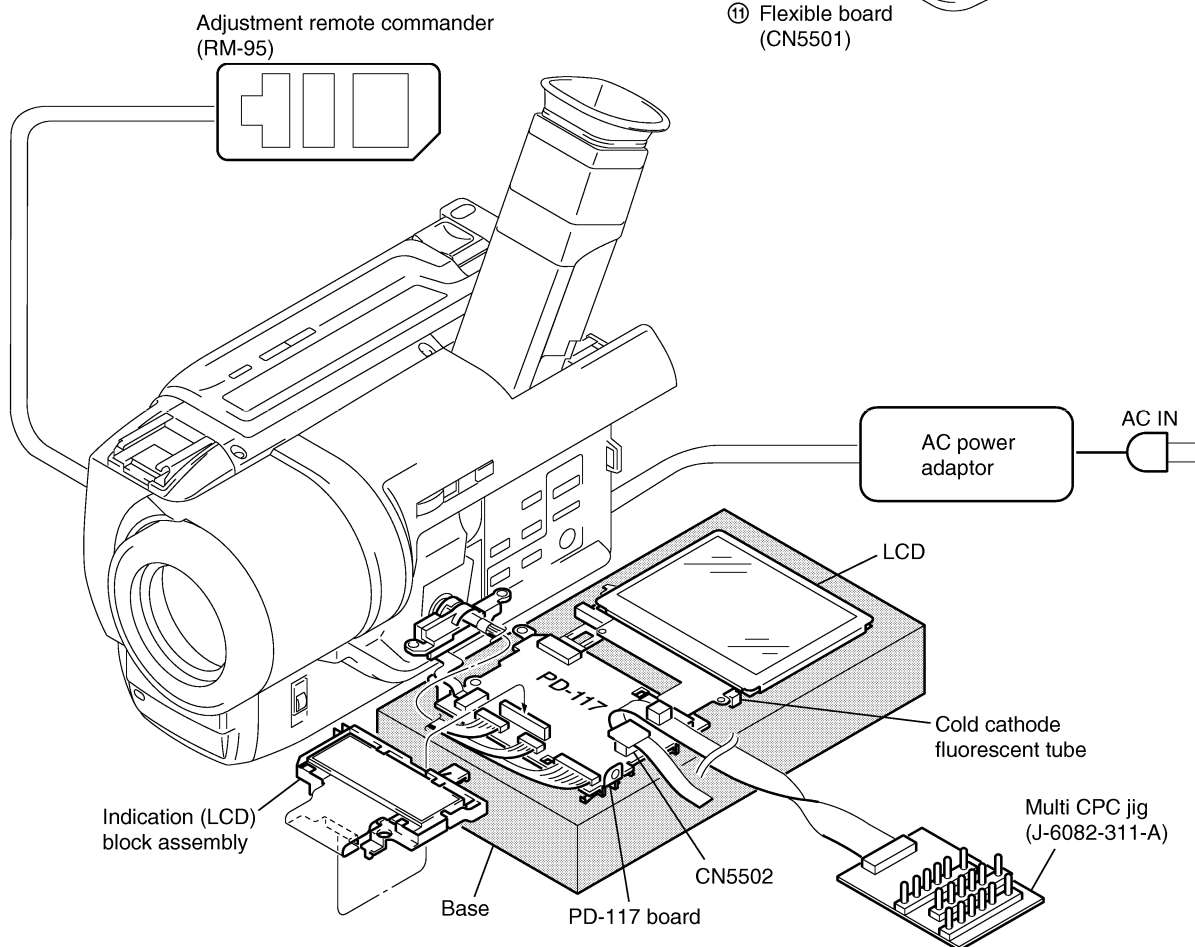


Note: Follow the disassembly procedure in the numerical order given.

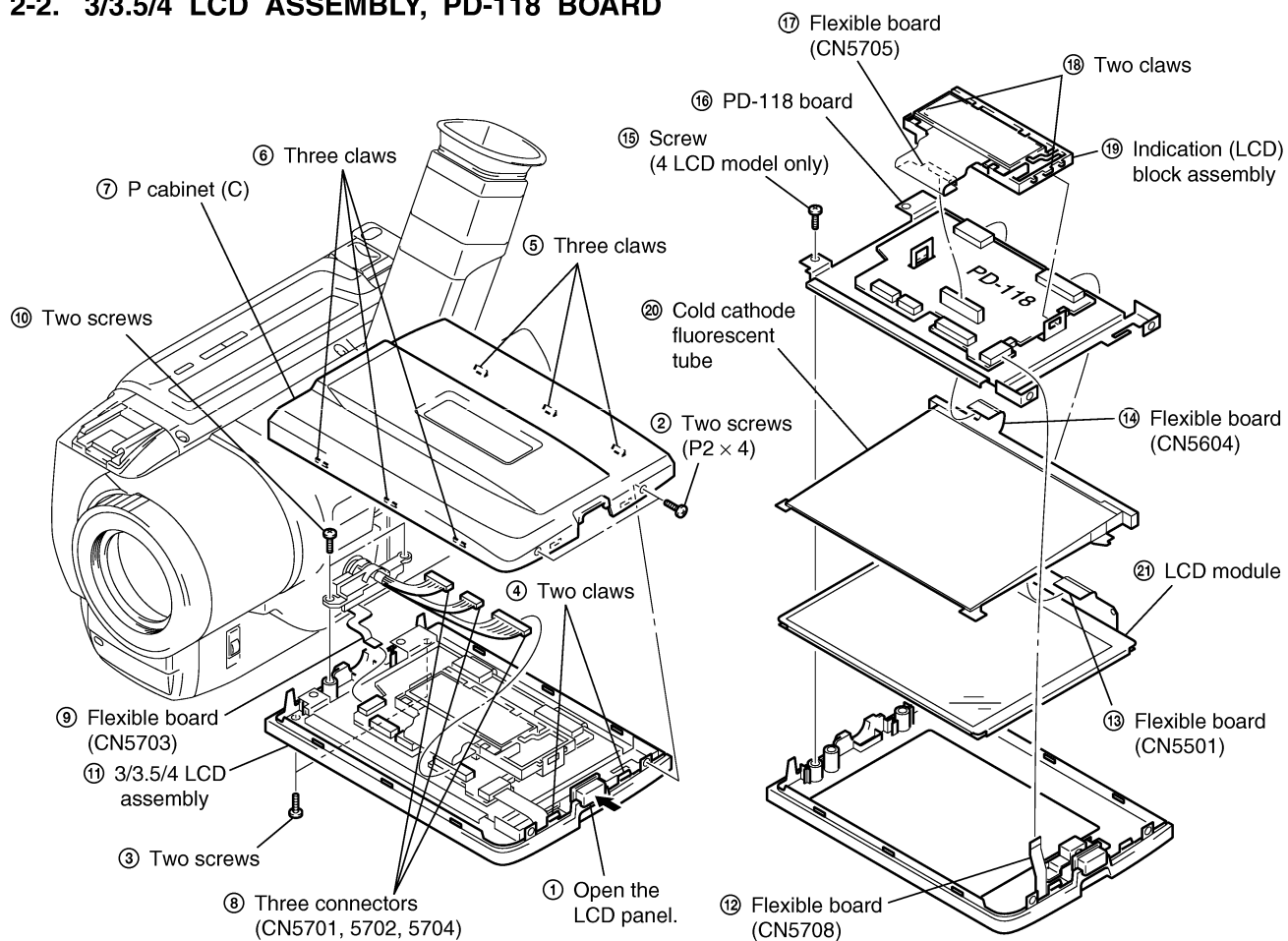
2-1. 2.5 LCD ASSEMBLY, PD-117 BOARD



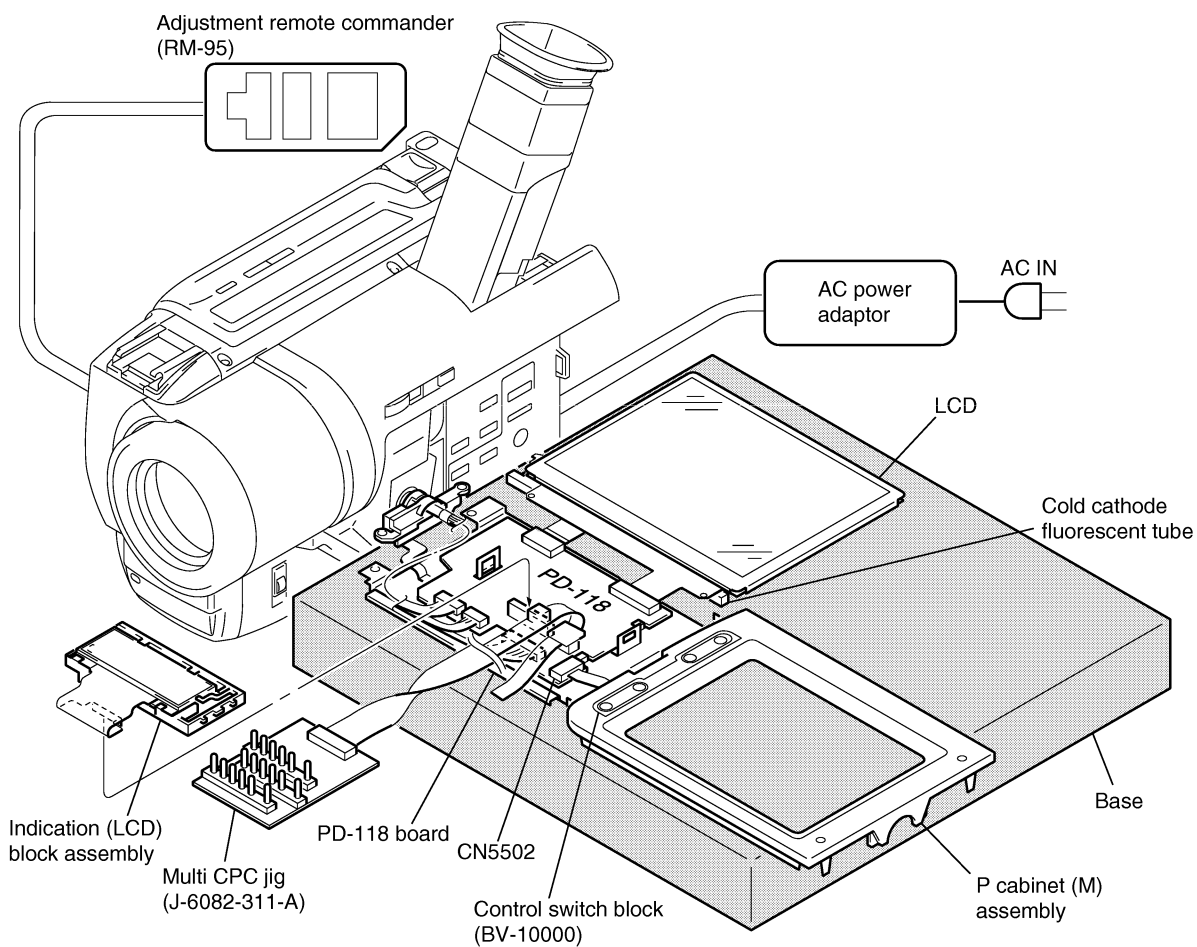
[2.5 LCD SERVICE POSITION]



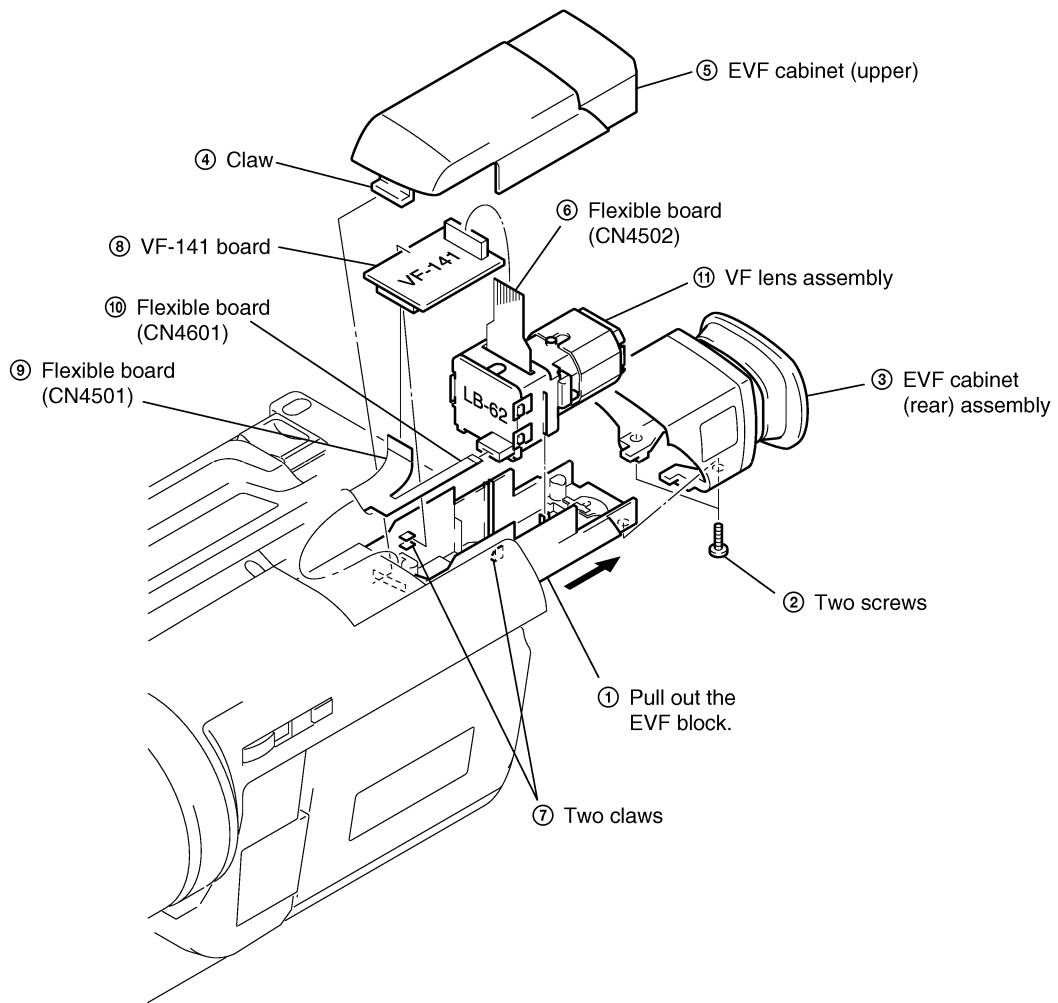
2-2. 3/3.5/4 LCD ASSEMBLY, PD-118 BOARD



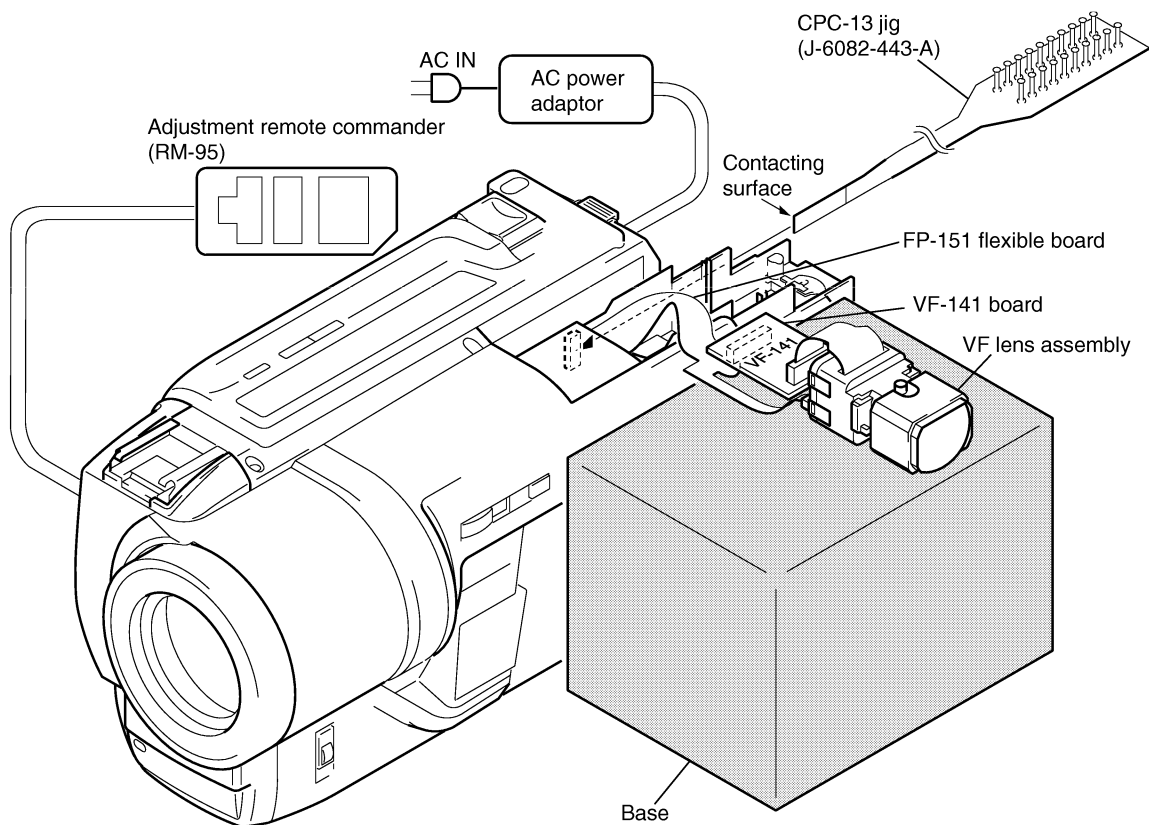
[3/3.5/4 LCD SERVICE POSITION]



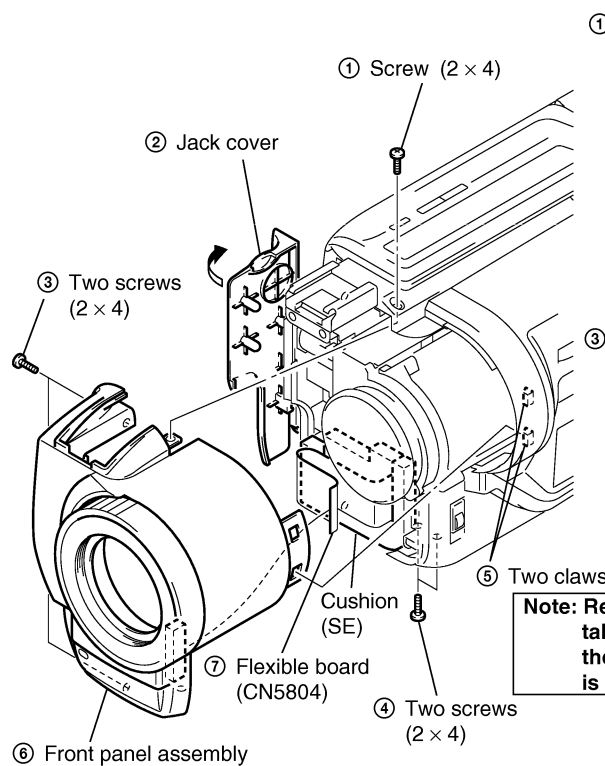
2-3. VF-141 BOARD, VF LENS ASSEMBLY (LCD EVF model)



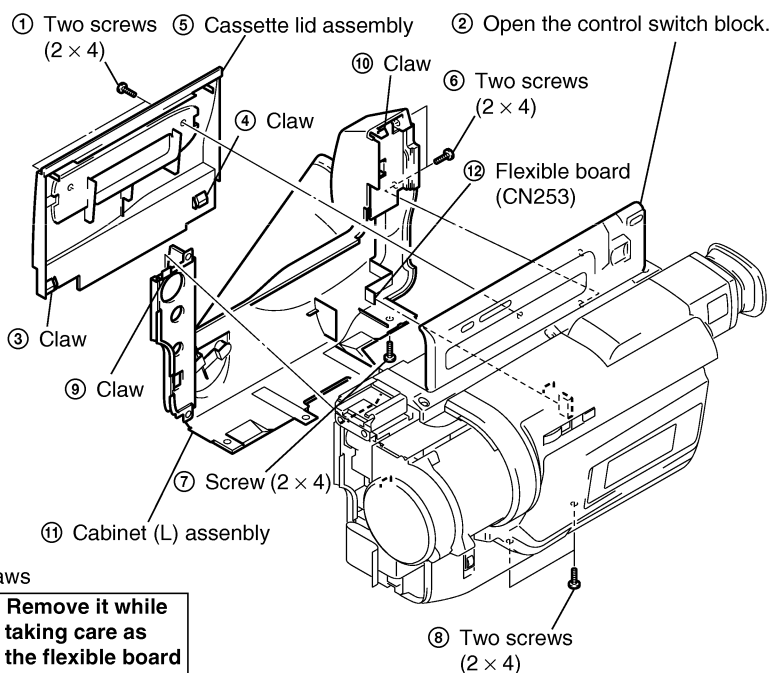
[LCD EVF SERVICE POSITION]



2-4. FRONT PANEL ASSEMBLY



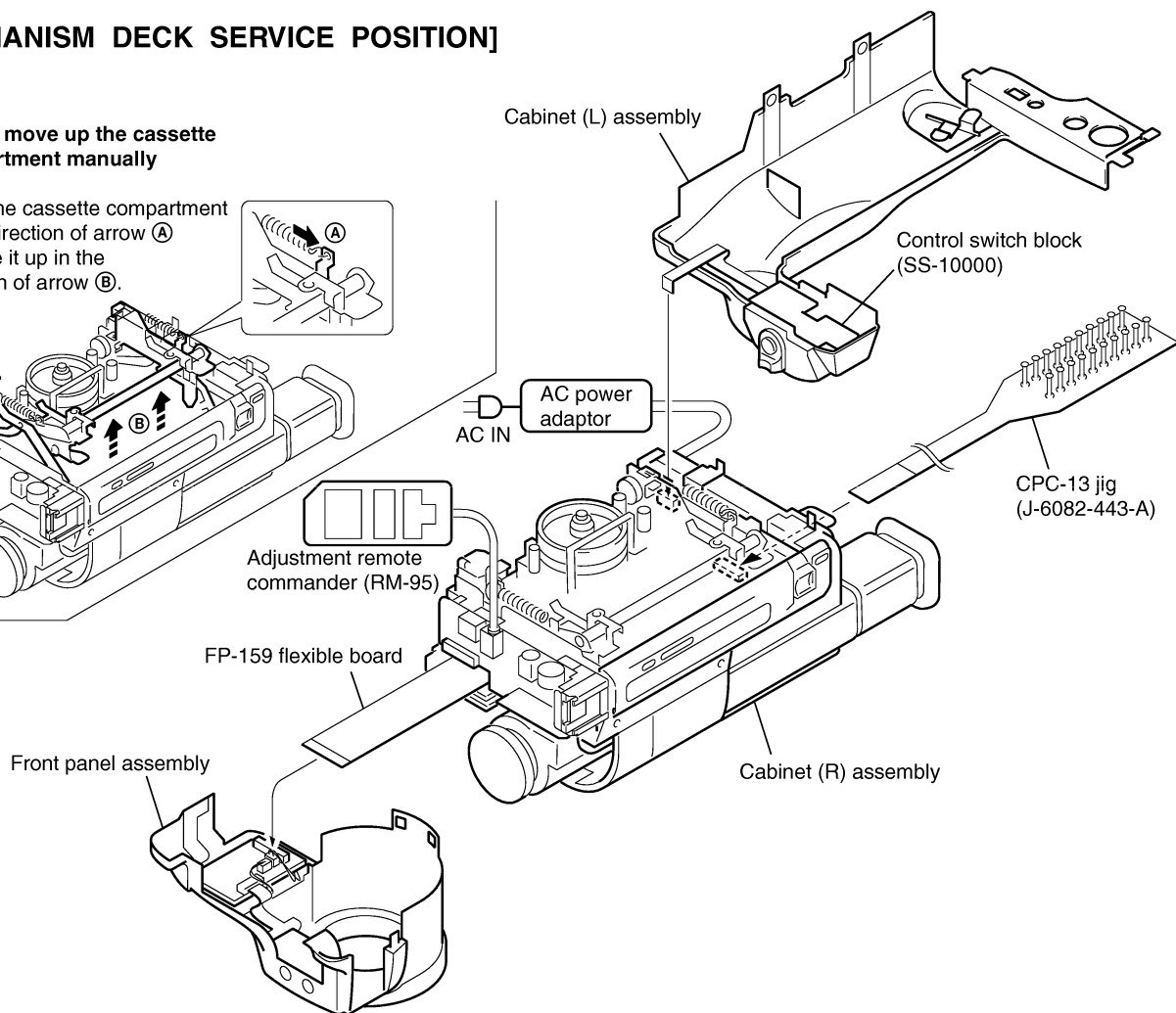
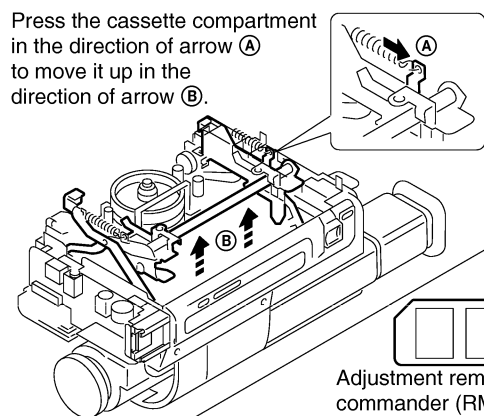
2-5. CASSETTE LID ASSEMBLY, CABINET (L) ASSEMBLY



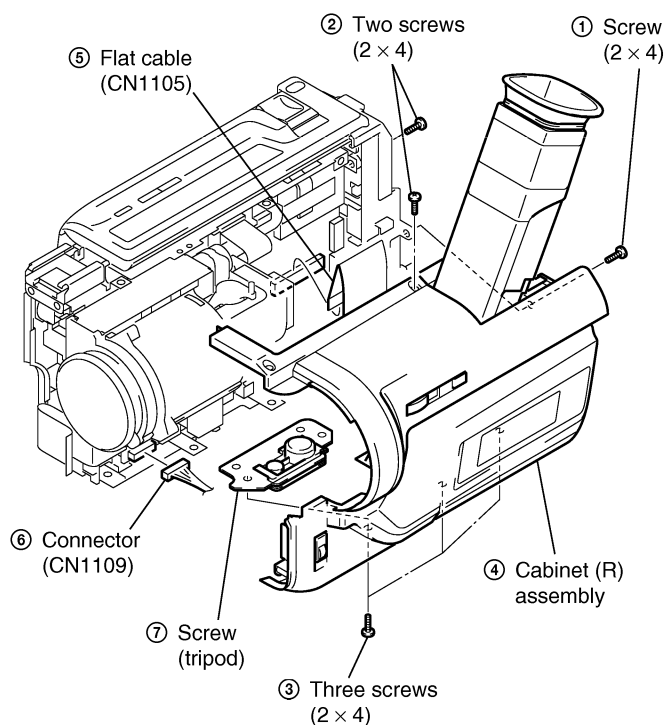
[MECHANISM DECK SERVICE POSITION]

• How to move up the cassette compartment manually

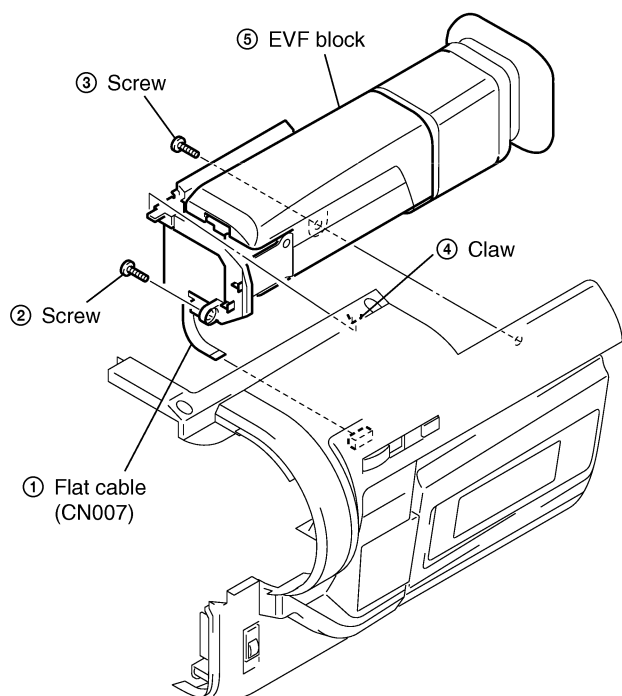
Press the cassette compartment in the direction of arrow (A) to move it up in the direction of arrow (B).



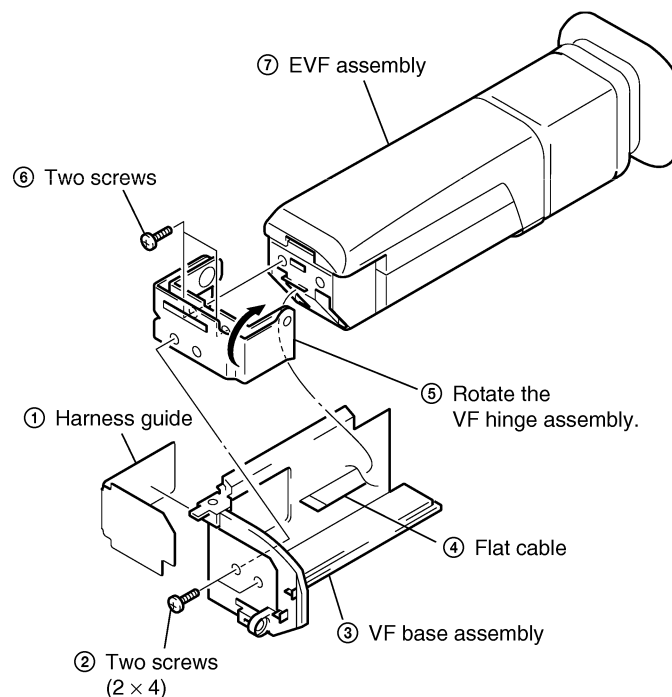
2-6. CABINET (R) ASSEMBLY



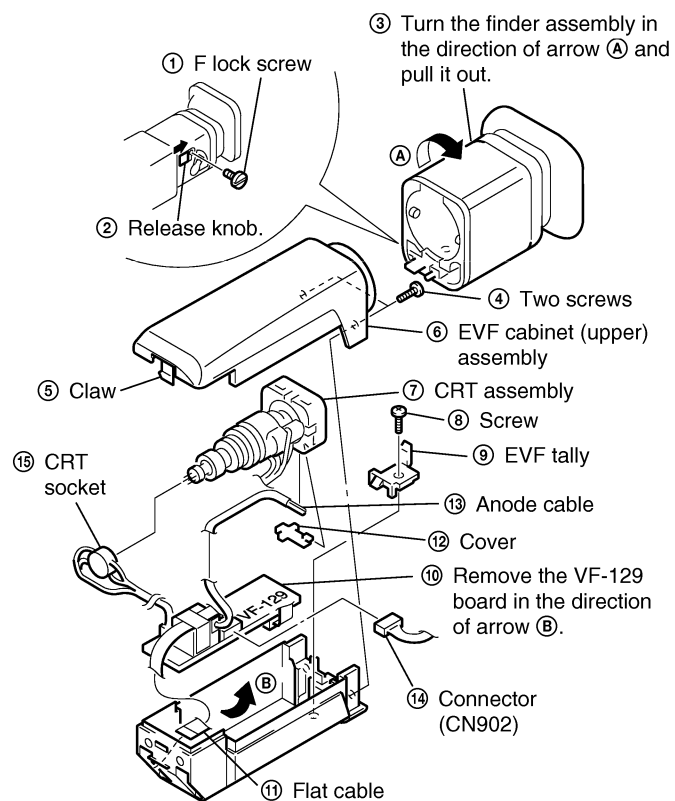
2-7. CRT EVF BLOCK



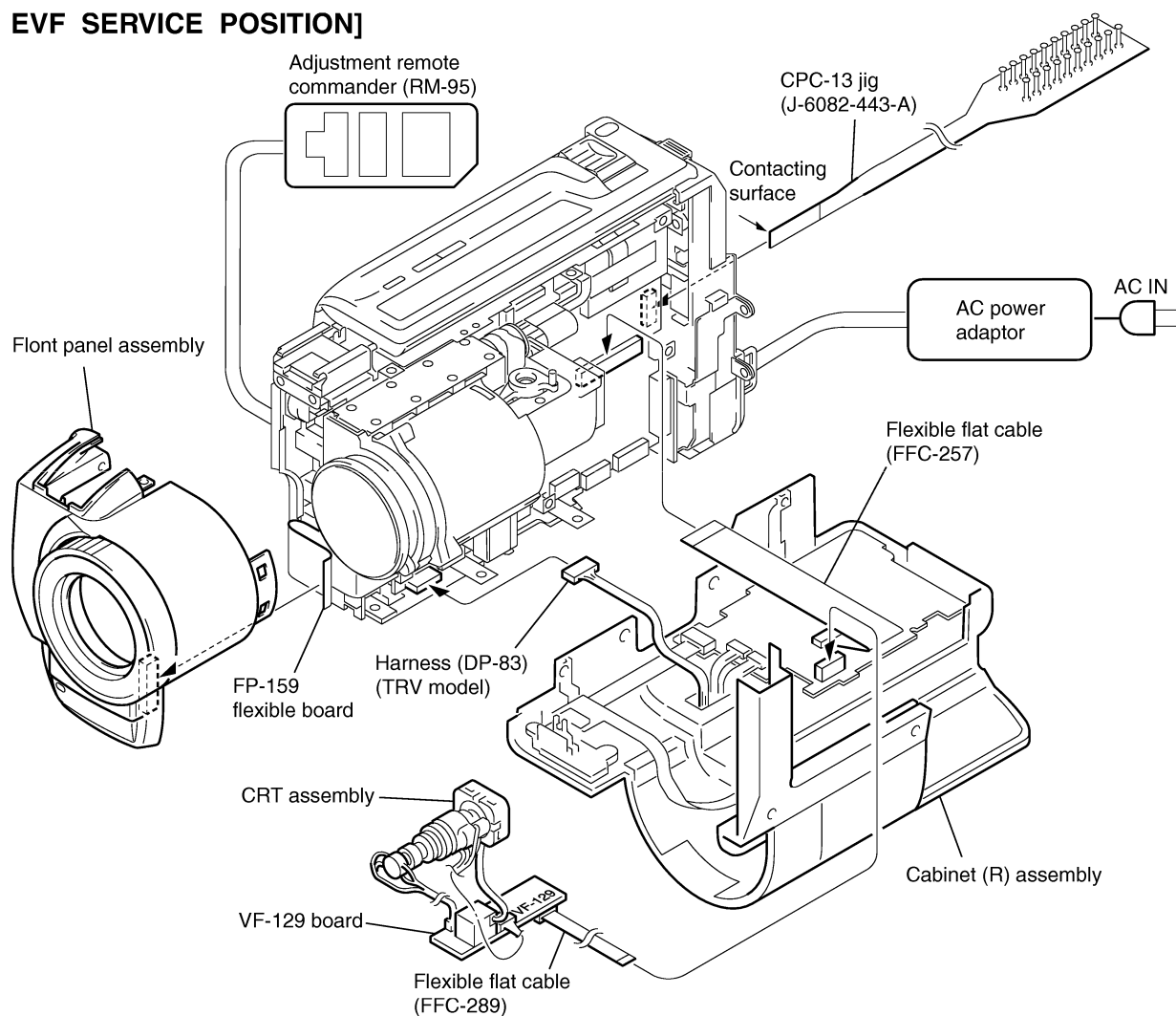
2-8. CRT EVF ASSEMBLY



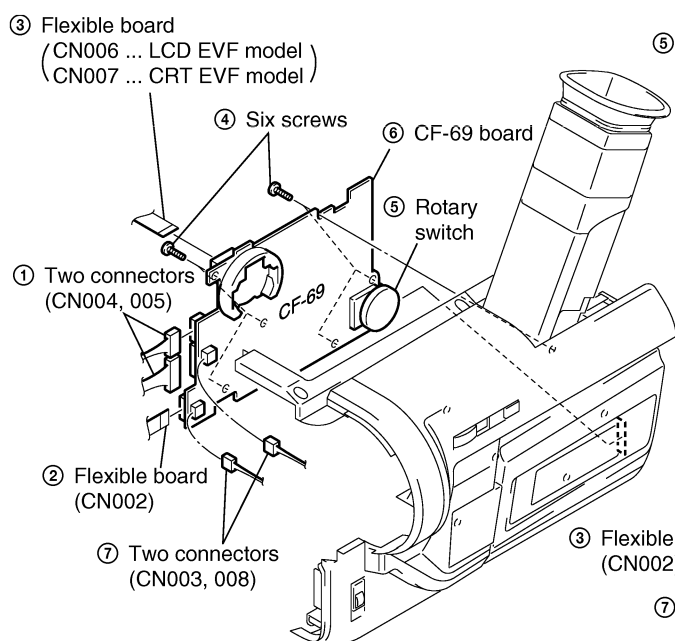
2-9. VF-129 BOARD, CRT ASSEMBLY



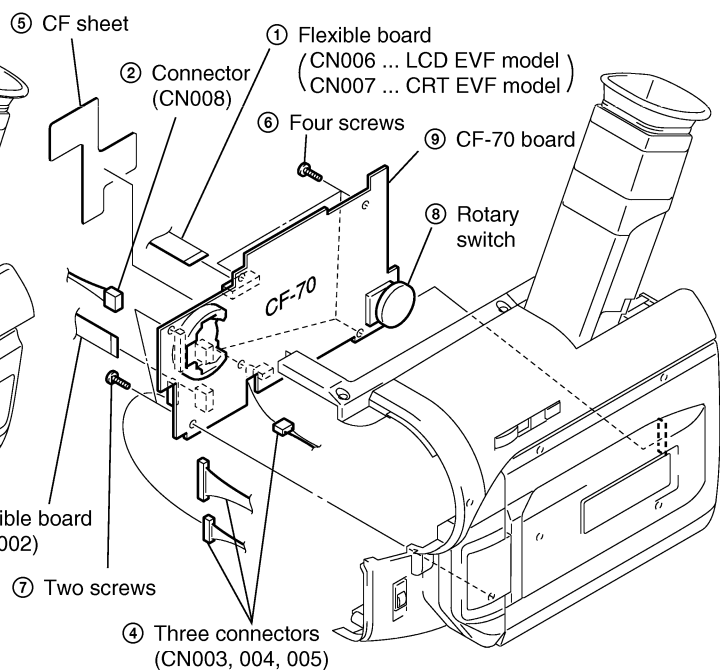
[CRT EVF SERVICE POSITION]



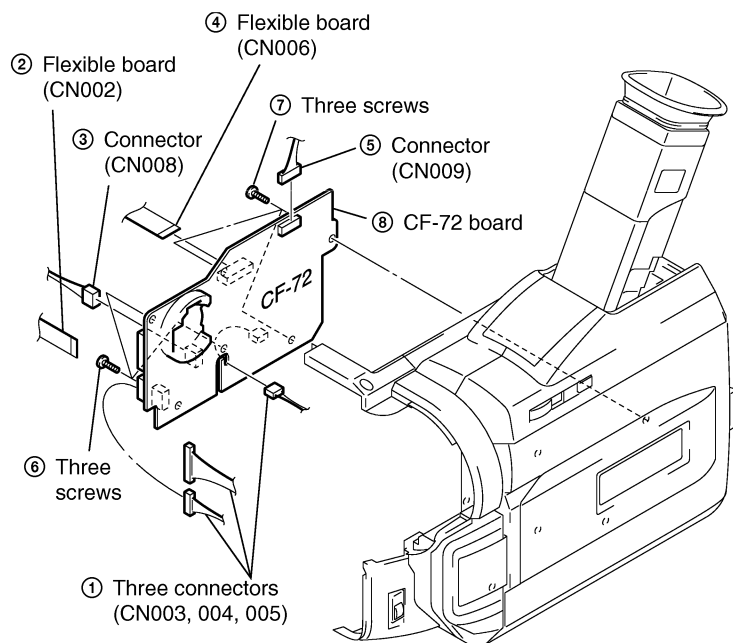
2-10. CF-69 BOARD (2.5 LCD model)



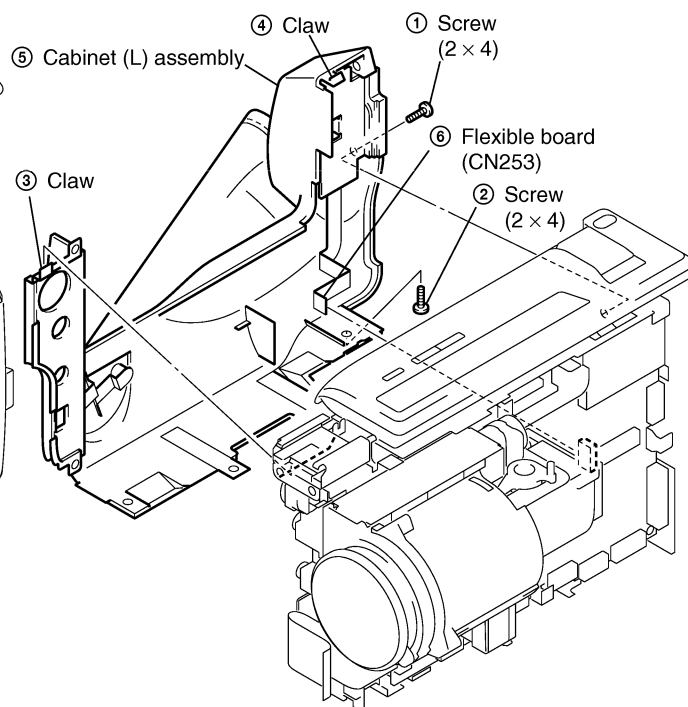
2-11. CF-70 BOARD (3/3.5 LCD model)



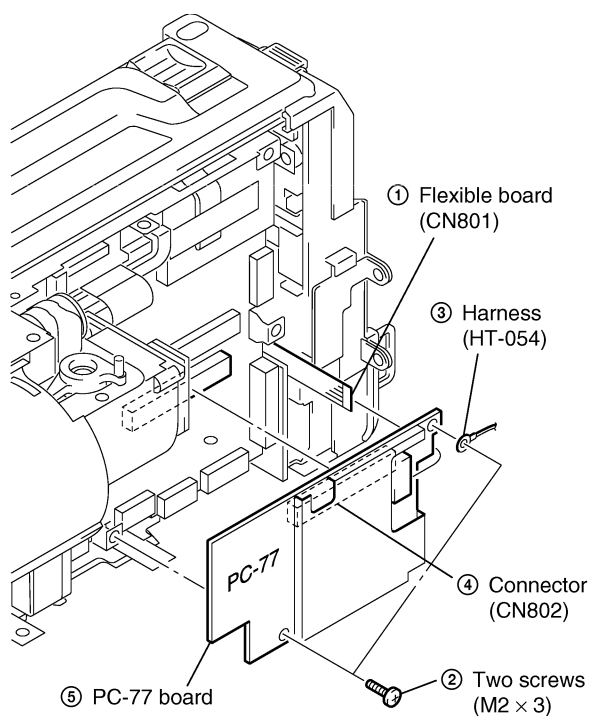
2-12. CF-72 BOARD (4 LCD model)



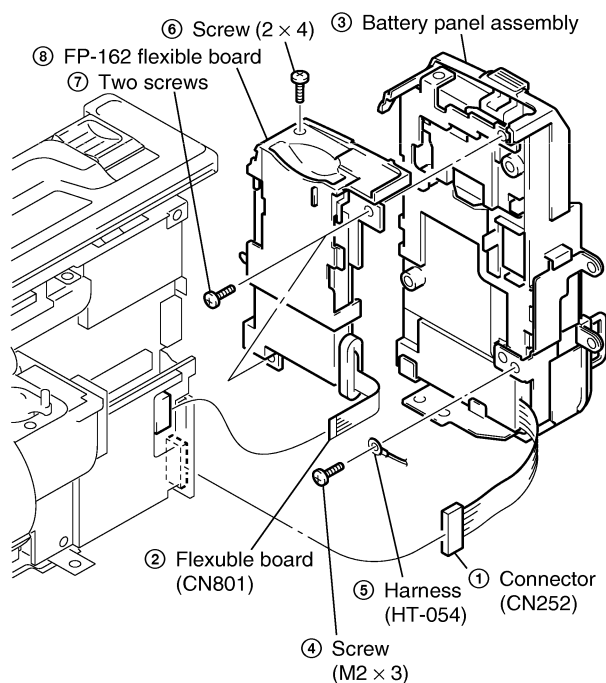
2-14. CABINET (L) ASSEMBLY



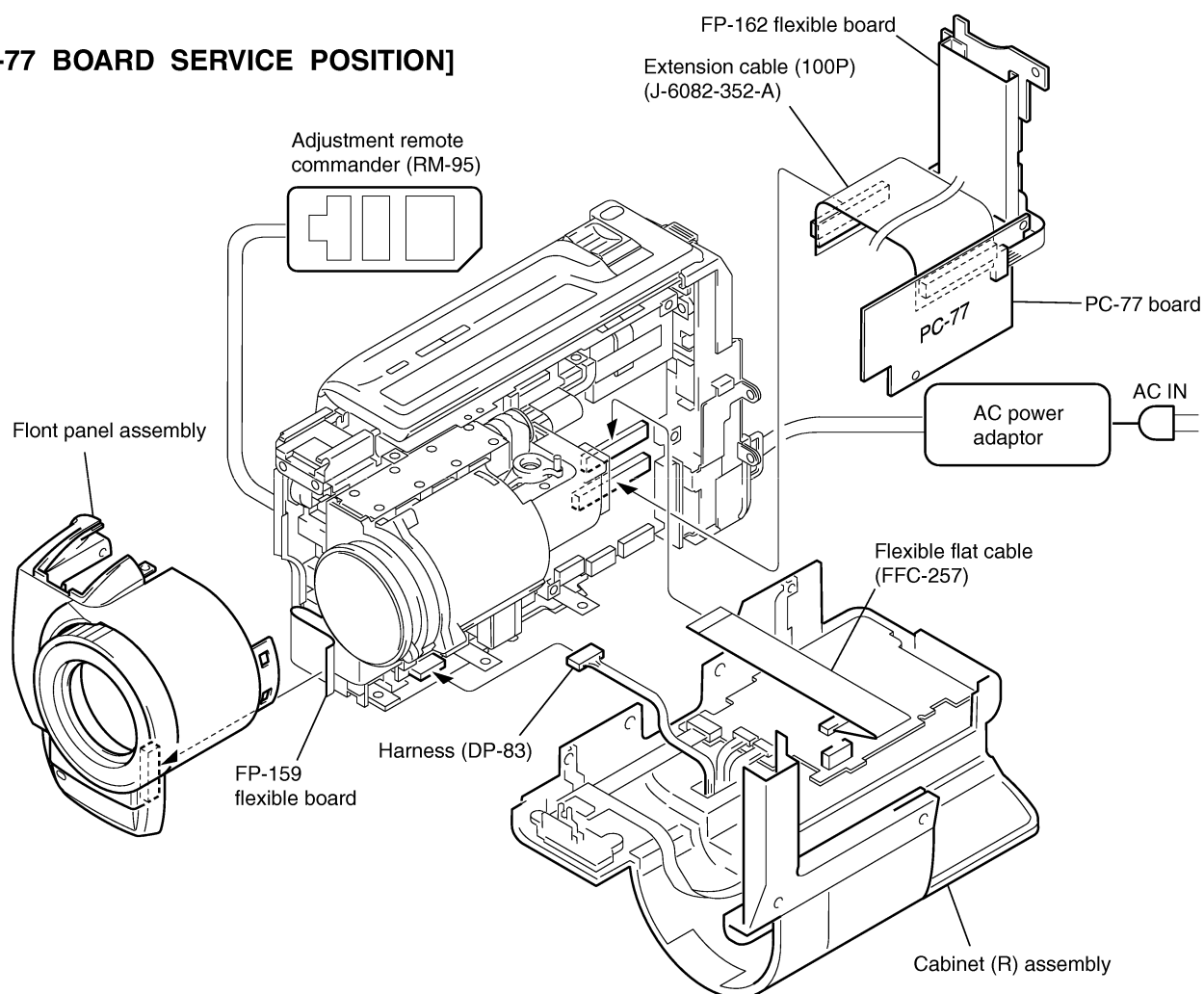
2-13. PC-77 BOARD



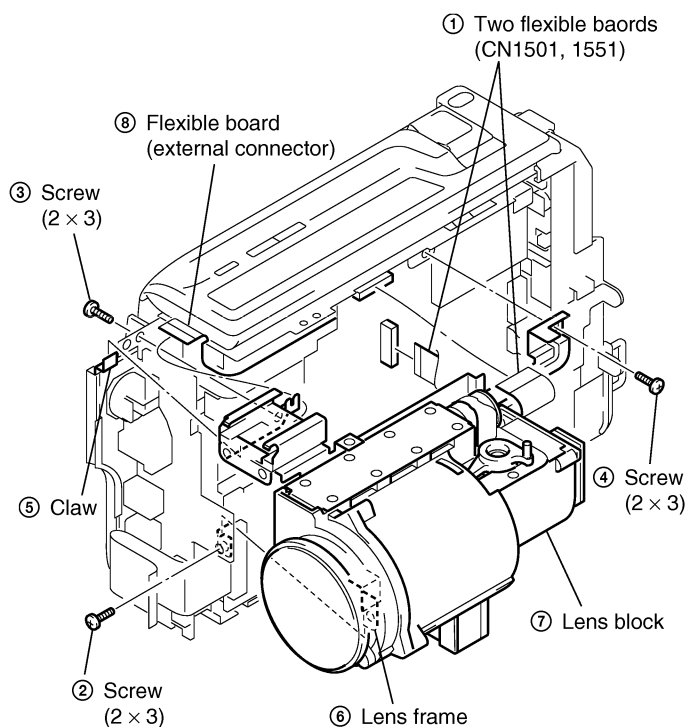
2-15. BATTERY PANEL ASSEMBLY, FP-162 FLEXIBLE BOARD



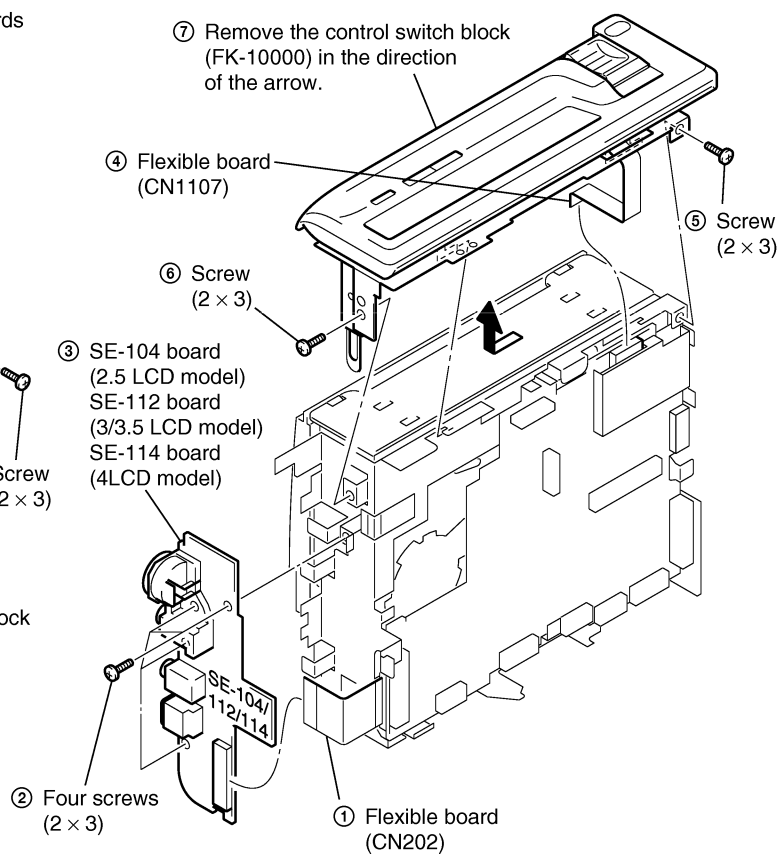
[PC-77 BOARD SERVICE POSITION]



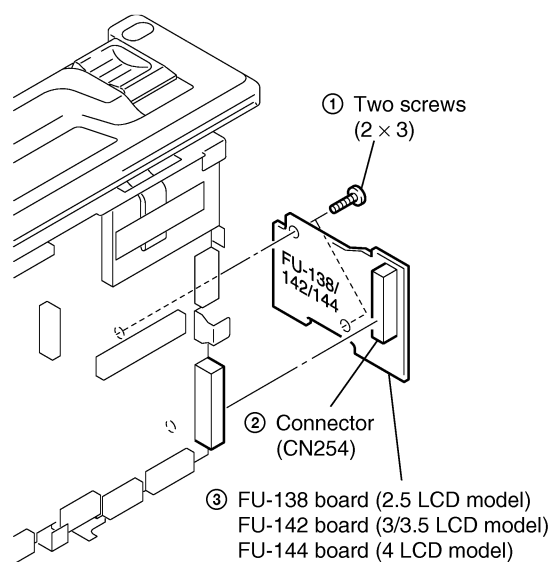
2-16. LENS BLOCK



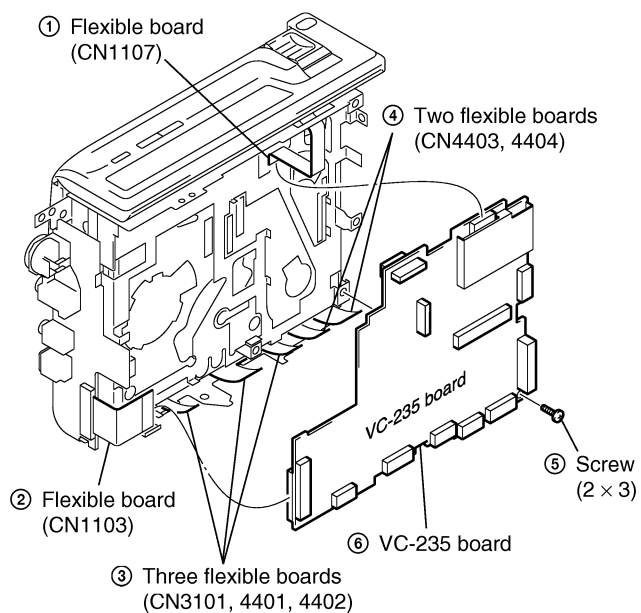
2-17. SE-104/112/114 BOARD, CONTROL SWITCH BLOCK (FK-10000)



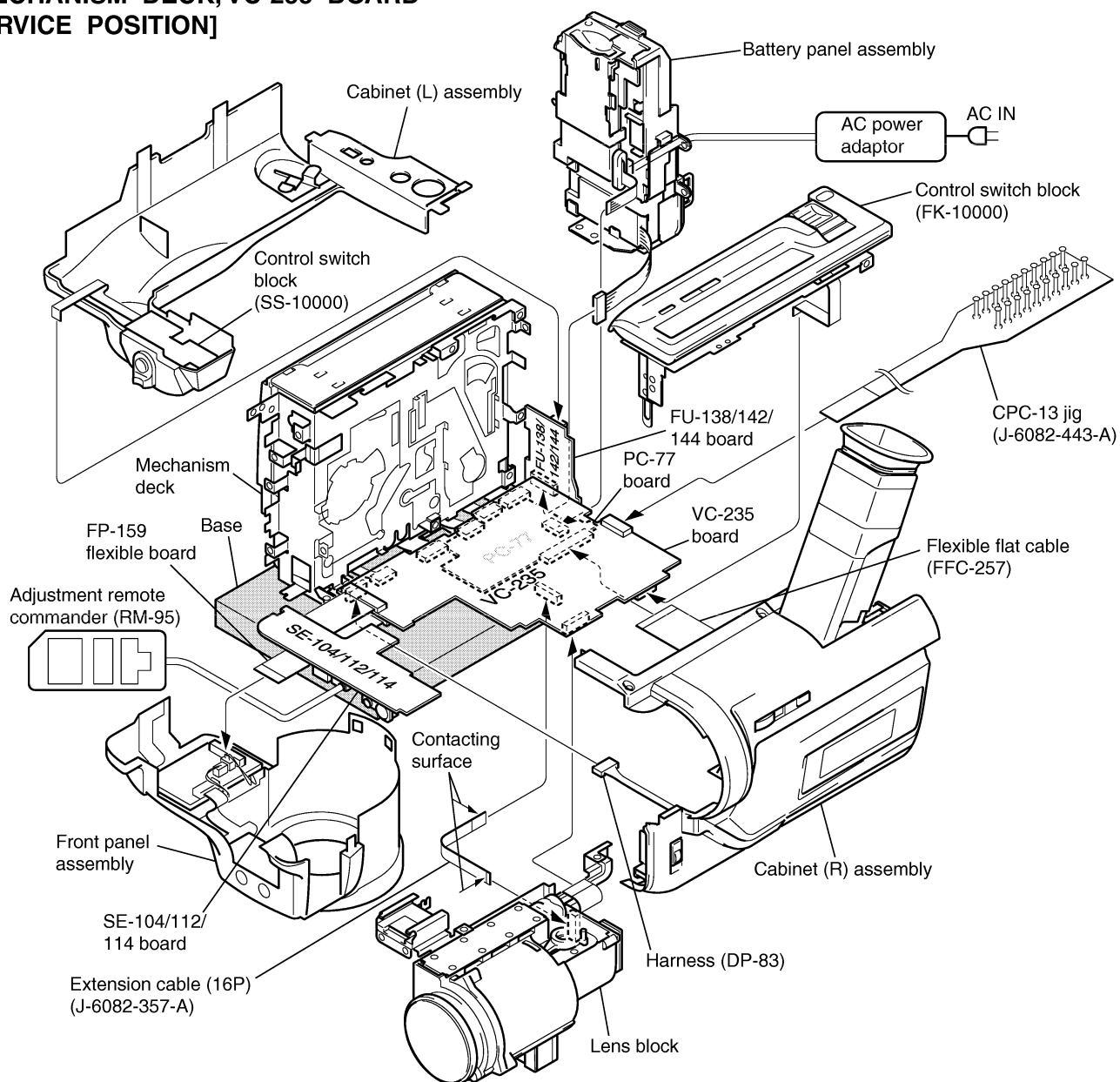
2-18. FU-138/142/144 BOARD



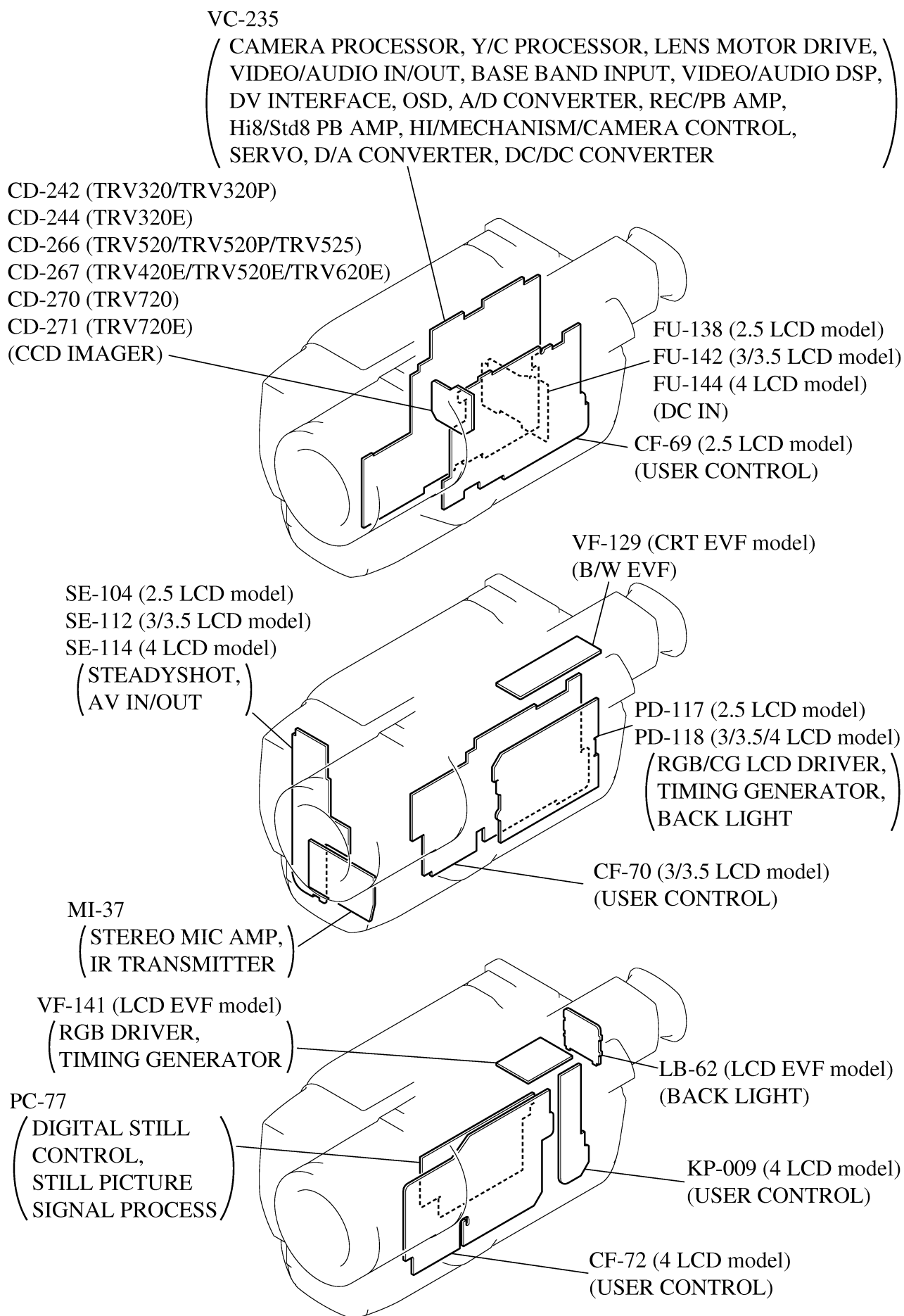
2-19. VC-235 BOARD



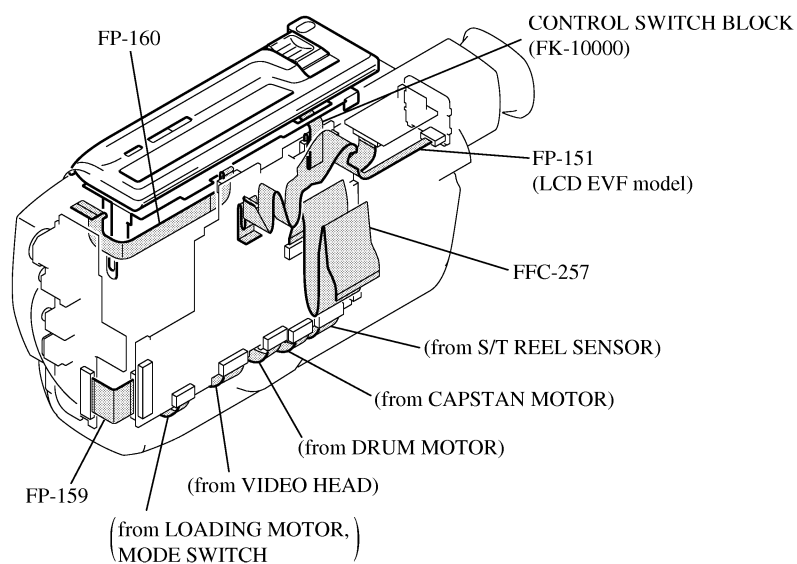
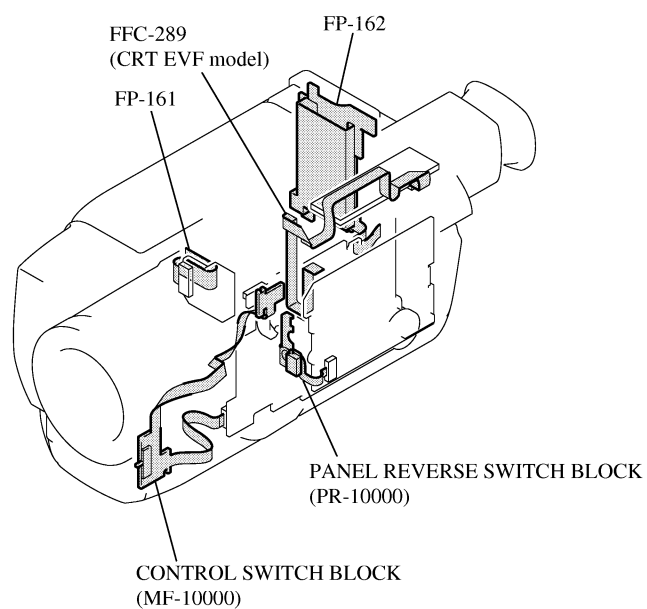
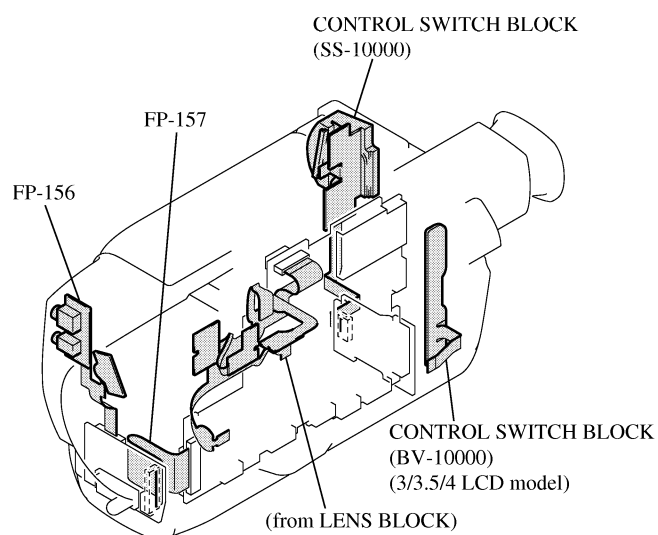
[MECHANISM DECK, VC-235 BOARD SERVICE POSITION]



2-20. CIRCUIT BOARDS LOCATION

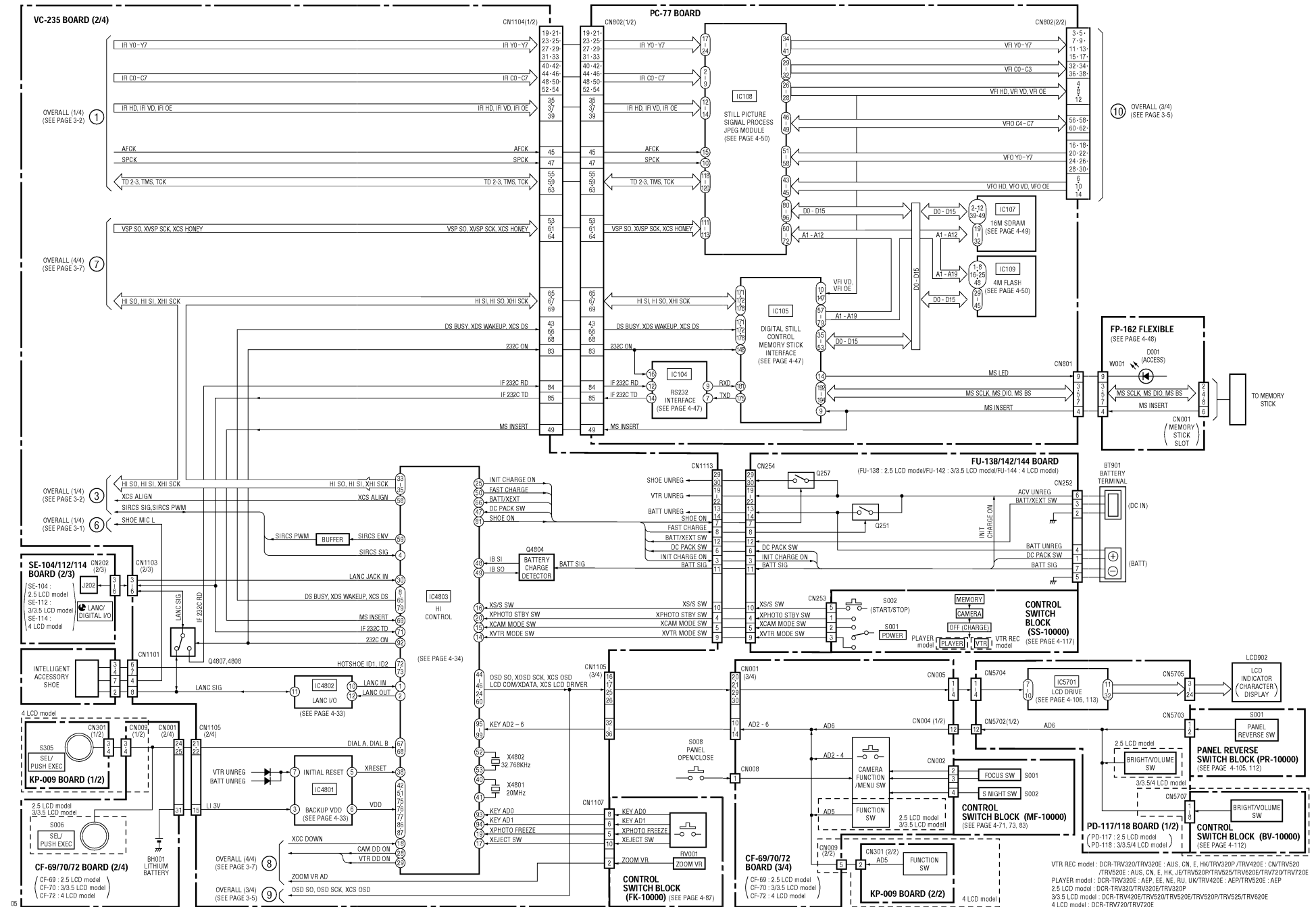


2-21. FLEXIBLE BOARDS LOCATION

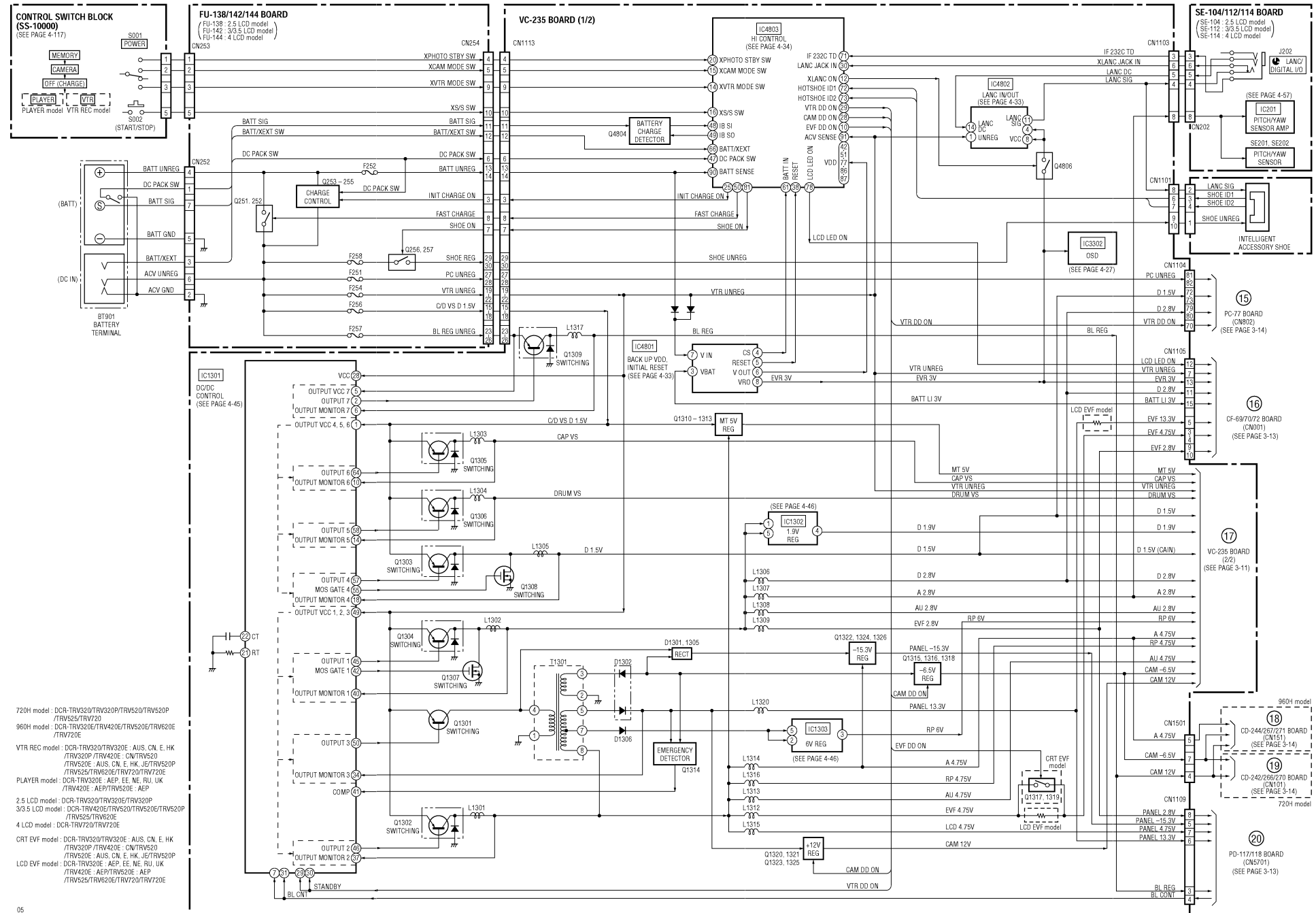


[illegible]

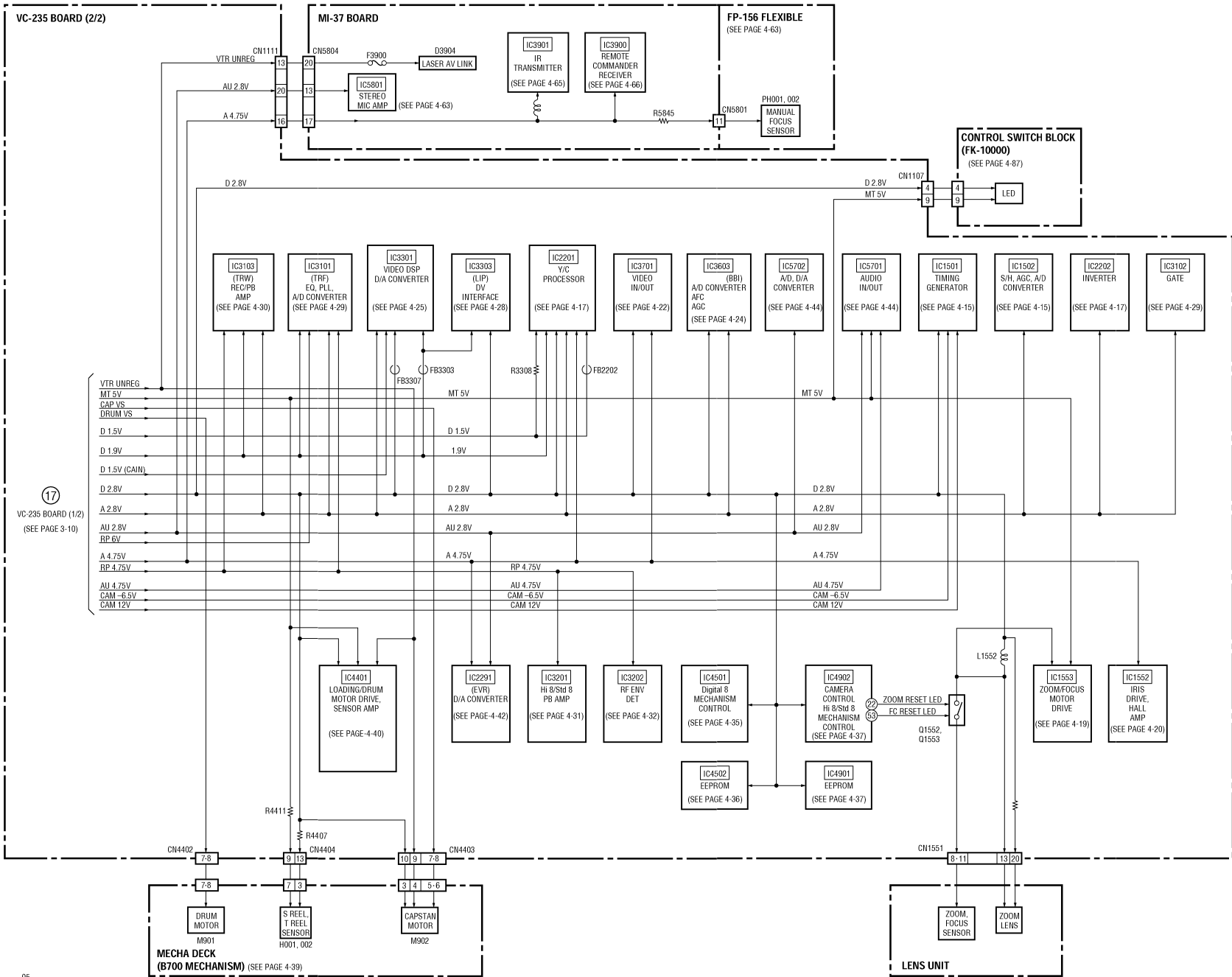
3-2. OVERALL BLOCK DIAGRAM 2



3-5. POWER BLOCK DIAGRAM 1



3-6. POWER BLOCK DIAGRAM 2



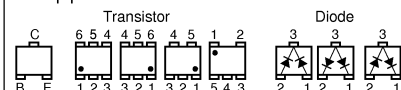
TYPE C/S model : Please refer to page 9 to discriminate the type of LCD

DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 SECTION 4 TRV620E/TRV720/TRV720E PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

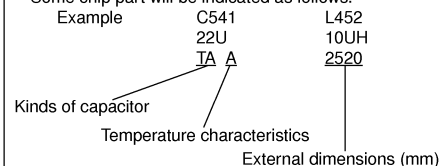
(For printed wiring boards)

- Pattern from the side which enables seeing.
(The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.



(For schematic diagrams)

- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F} : 50 \text{ V}$ or less are not indicated except for electrolytics and tantalums.
- Chip resistors are $1/10 \text{ W}$ unless otherwise noted. $\text{k}\Omega = 1000 \Omega$, $\text{M}\Omega = 1000 \text{ k}\Omega$.
- Caution when replacing chip parts.
New parts must be attached after removal of chip.
Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.



- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
In such cases, the unused circuits may be indicated.
- Parts with \star differ according to the model/destination.
Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
XEDIT \rightarrow EDIT PB/XREC \rightarrow PB/REC
- \square : non flammable resistor
- \square : fusible resistor
- \square : panel designation
- \square : B+ Line *
- \square : B- Line *
- \square : IN/OUT direction of (+,-) B LINE. *
- \square : adjustment for repair. *
- Circled numbers refer to waveforms. *
- * Indicated by the color red.

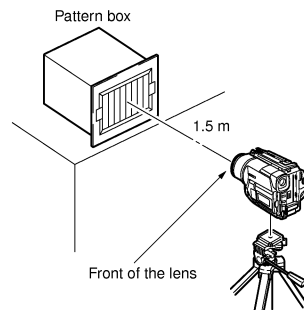
Note : The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Note : Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(Measuring conditions voltage and waveform)

- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms. *
(VOM of DC $10 \text{ M}\Omega$ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

1. Connection



2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

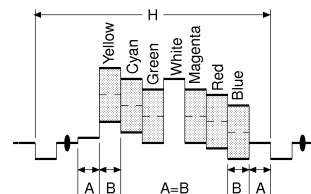


Fig. a (Video output terminal output waveform)

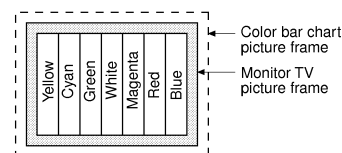


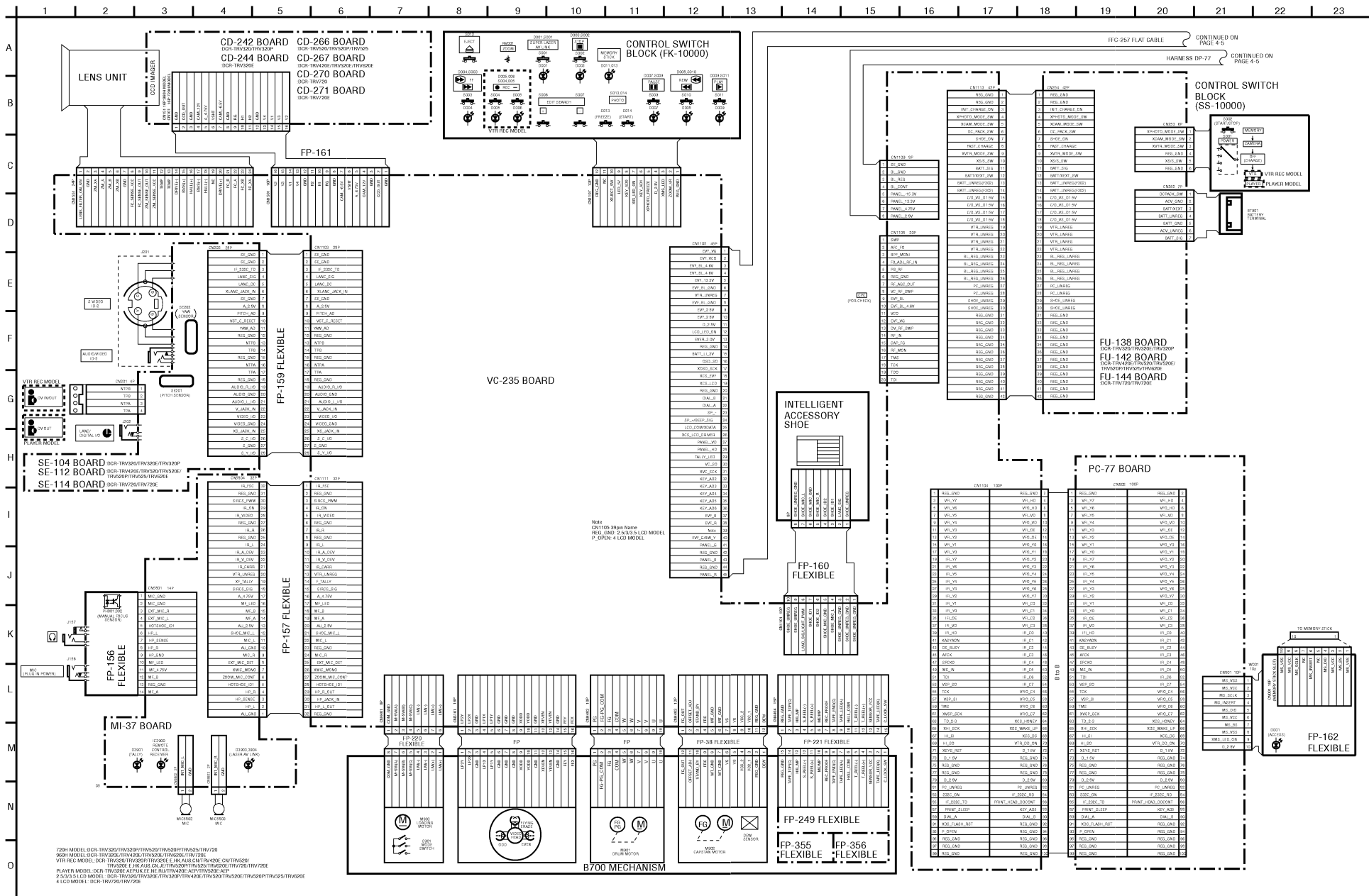
Fig.b (Picture on monitor TV)

When indicating parts by reference number, please include the board name.

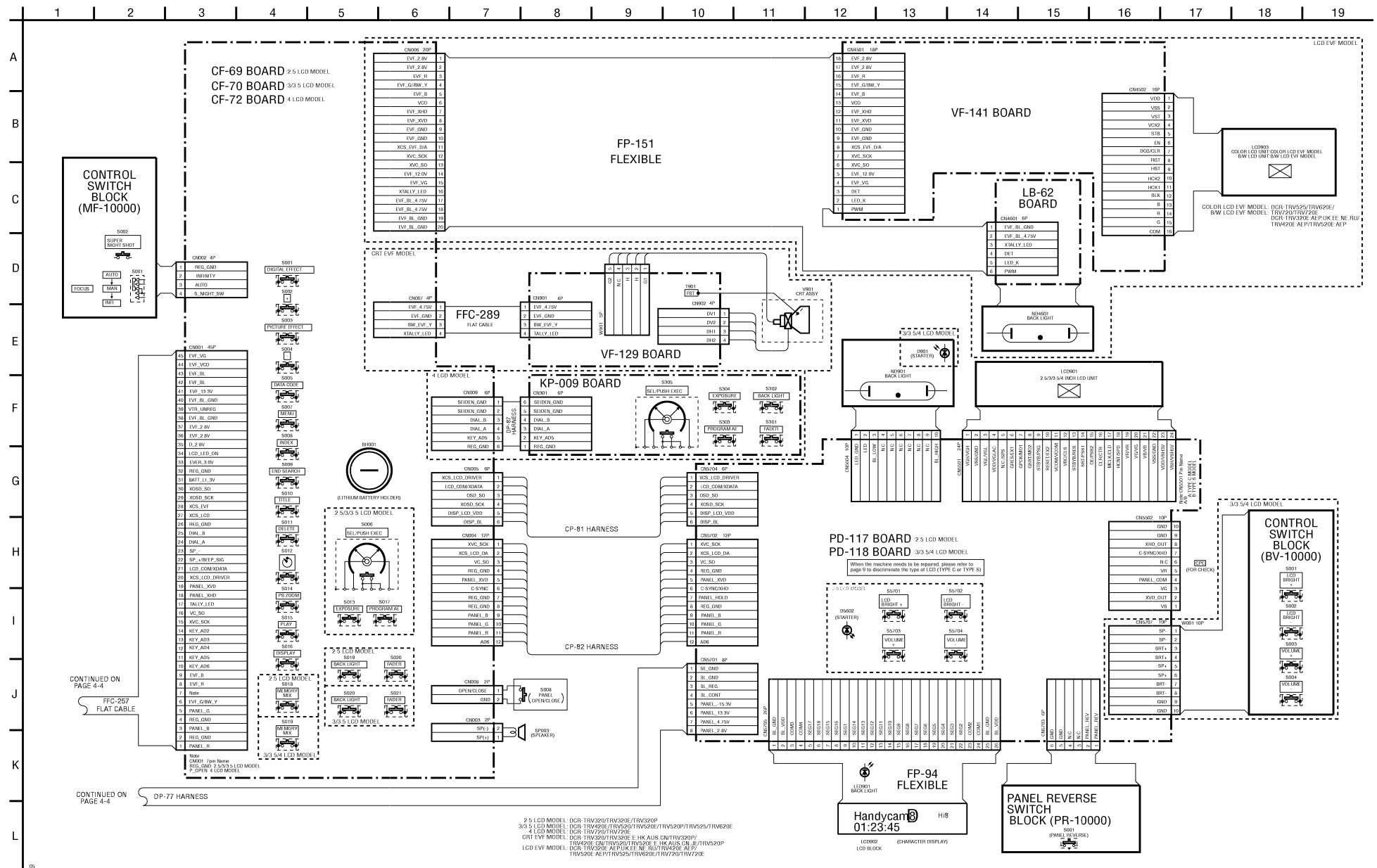
DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E

4-1. FRAME SCHEMATIC DIAGRAMS

FRAME (1/2) SCHEMATIC DIAGRAM



FRAME (2/2) SCHEMATIC DIAGRAM



4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

CD-242/266/270 (CCD IMAGER) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM • See page 4-119 for waveforms.

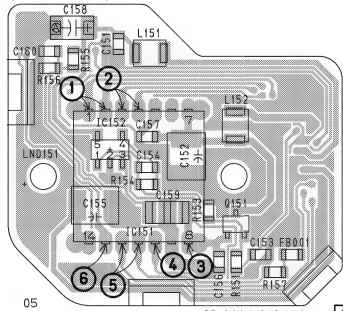
– Ref. No.: CD-242/266/270 board; 20,000 series –

– DCR-TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720 –

- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



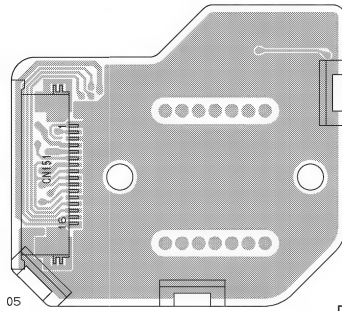
CD-244/267/271 BOARD
(SIDE A)



CD-244:1-676-774
CD-267:1-676-760-
CD-271:1-676-767-

12 (22)
11 (21)
11

CD-244/267/271 BOARD
(SIDE B)



CD-244:1-676-774
CD-267:1-676-760-
CD-271:1-676-767-

| |
|---------|
| 12 (22) |
| 11 (21) |
| 11 |

CD-242 BOARD (DCR-TRV320/TRV320P)

CD-266 BOARD (DCR-TRV520/TRV520P/TRV525)

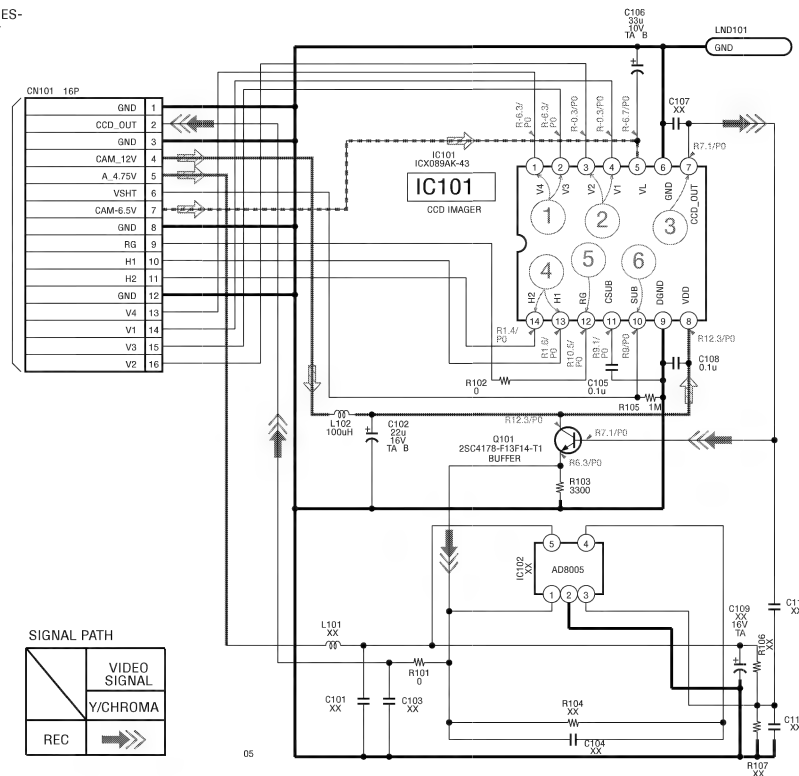
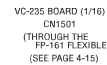
CD-270 BOARD (DCR-TRV720)

CCD IMAGER

-REF.NO.:20,000 SERIES-

XX MARK:NO MOUNT

R:REC MODE
P:PB MODE



Precautions for Replacement of CCD Imager

- The CD-242/266/270 board mounted as a repair part is not equipped with a CCD imager.
- When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
 - As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
- In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

CD-244/267/271 (CCD IMAGER) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM • See page 4-119 for waveforms.

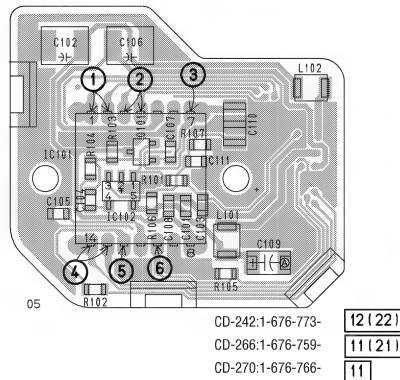
– Ref. No.: CD-244/267/271 board; 20,000 series –

– DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E –

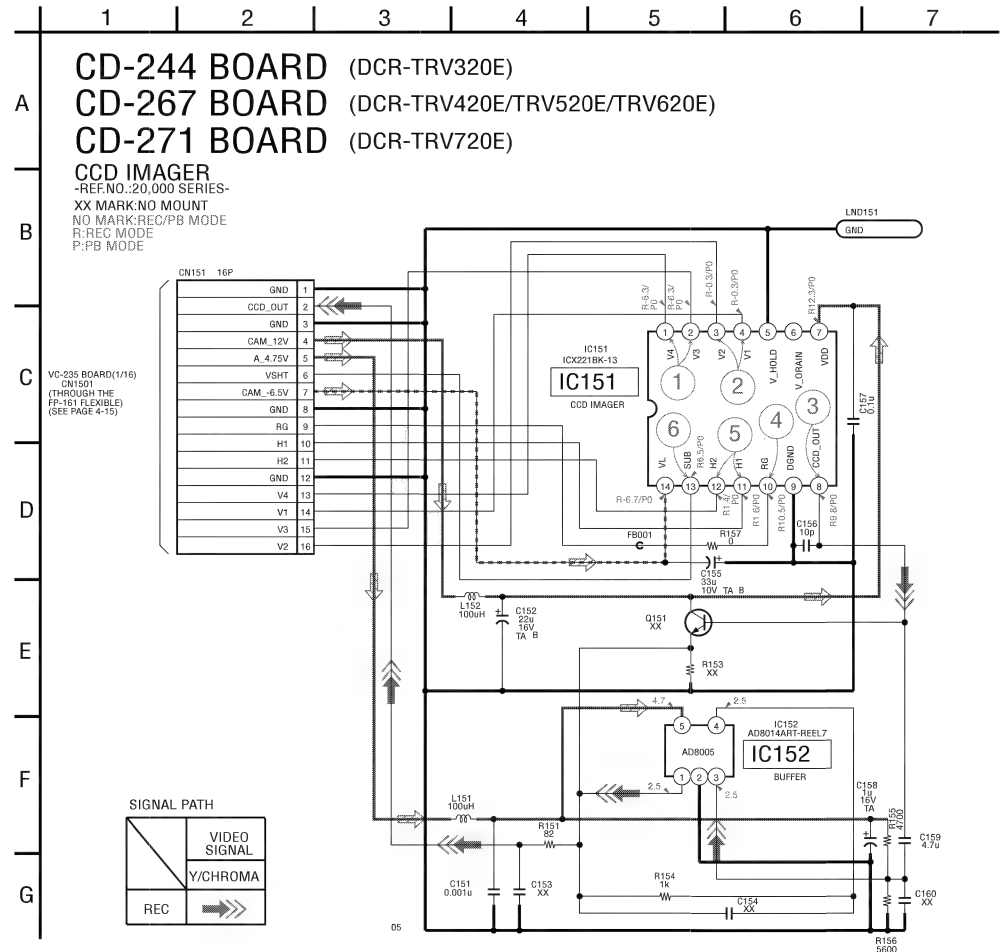
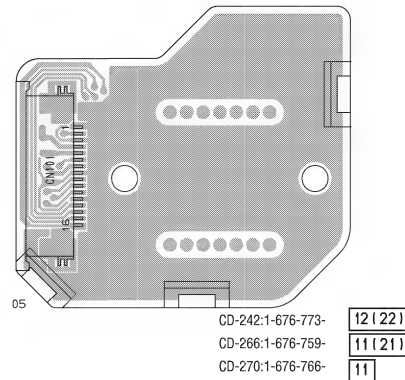
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



CD-242/266/270 BOARD
(SIDE A)



CD-242/266/270 BOARD
(SIDE B)



Precautions for Replacement of CCD Imager

- The CD-244/267/271 board mounted as a repair part is not equipped with a CCD imager.
When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
 - If the CCD imager has been replaced, carry out all the adjustments for the camera section.
 - As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
- In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 TRV620E/TRV720/TRV720E

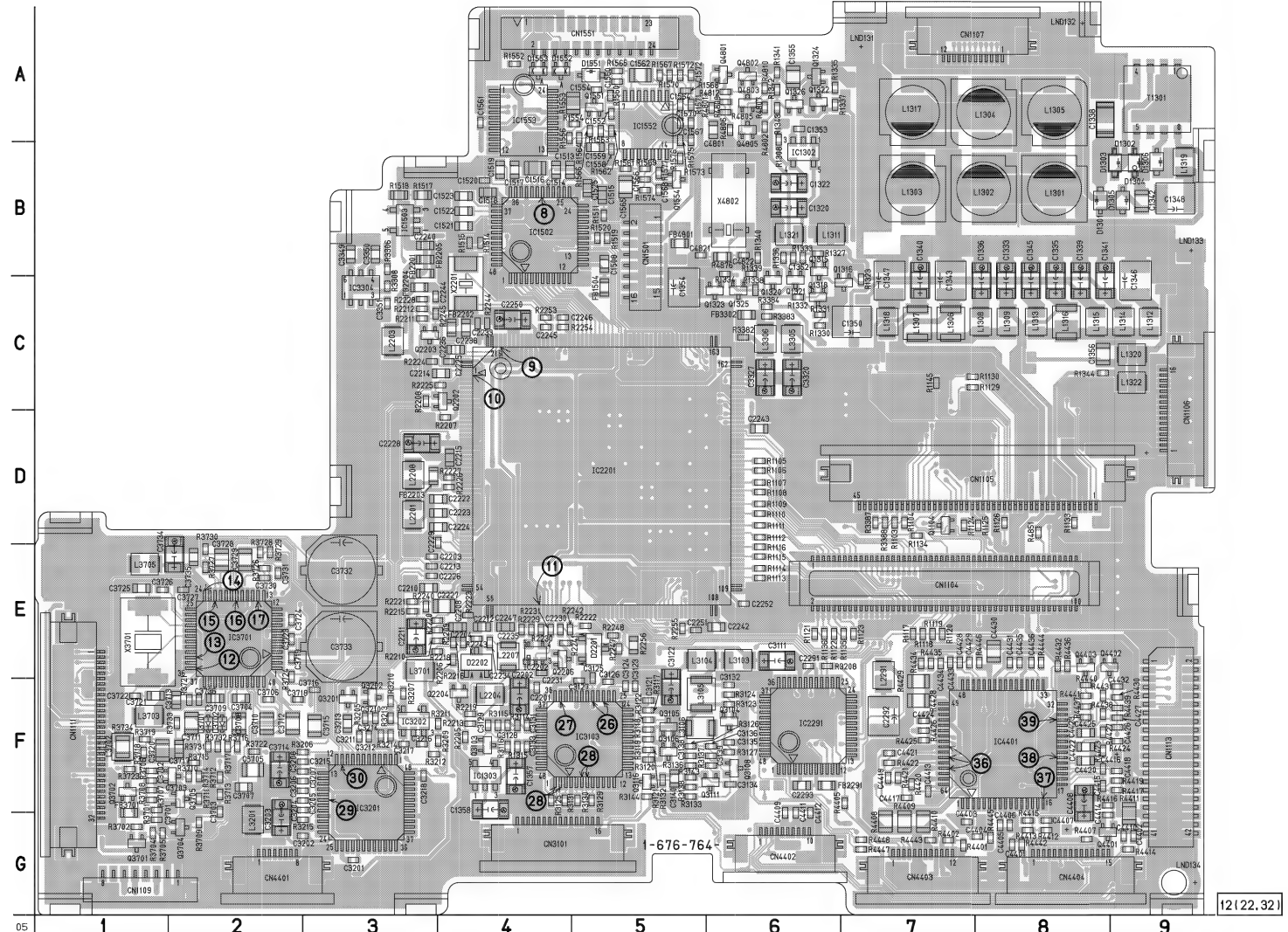
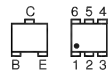
VC-235 (CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO /AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER) PRINTED WIRING BOARD

– Ref. No.: VC-235 board; 10,000 series –

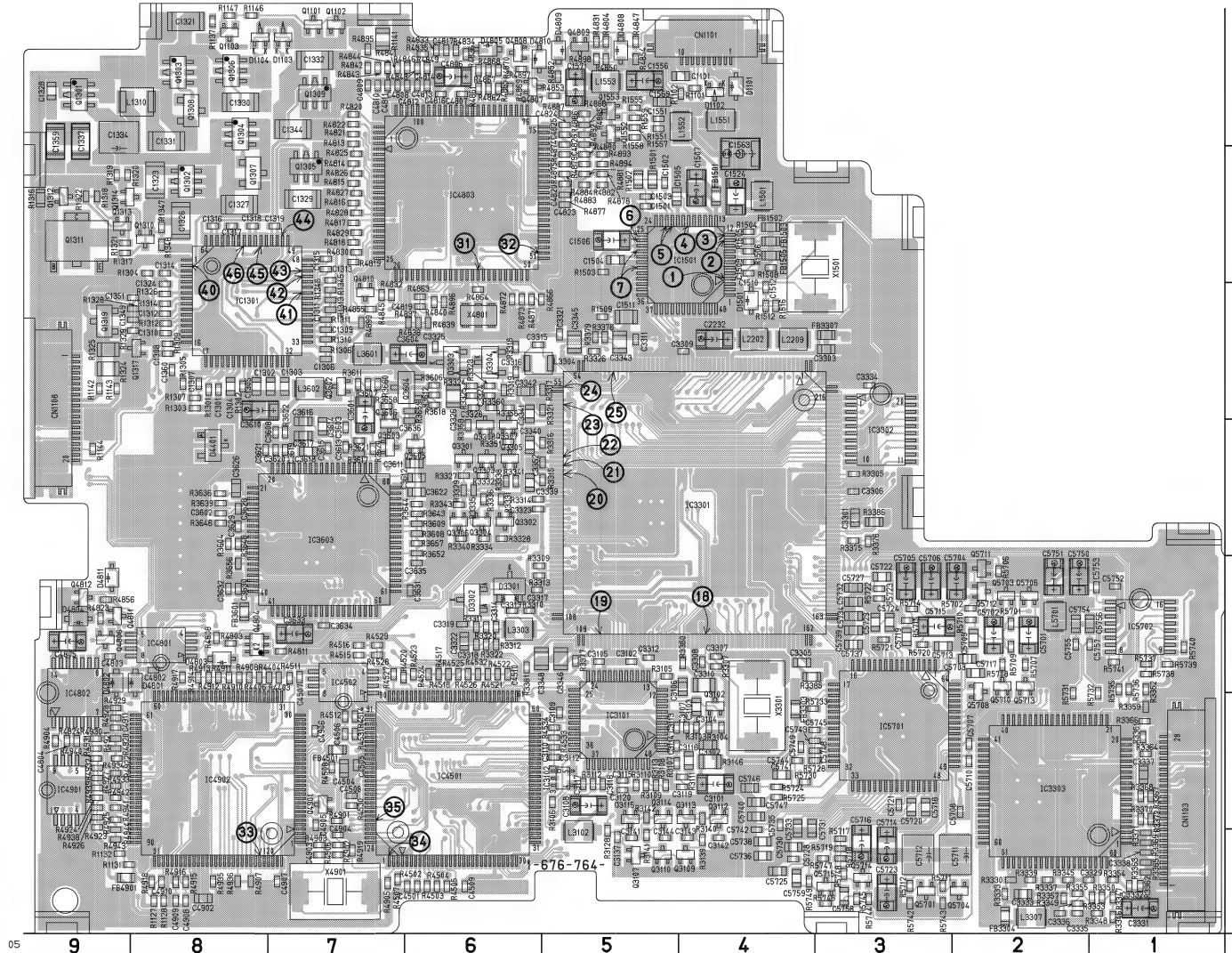
VC-235 BOARD (SIDE A)

• For Printed Wiring Board.

- VC-235 board is eight-layer print board. However, the patterns of layers 2 to 7 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-124, 125 for printed parts location.
- Chip transistor

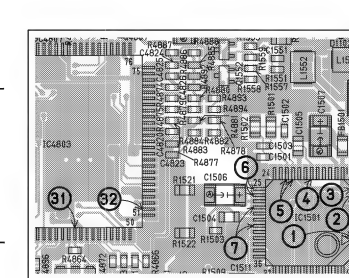


VC-235 BOARD (SIDE B)

VC-235 BOARD (SIDE B)
Part No. 1-676-764-13 (23, 33)

Location: B – 5

- Refer to the printed wiring board for suffix number **12 (22, 32)** for the parts not be shown here.

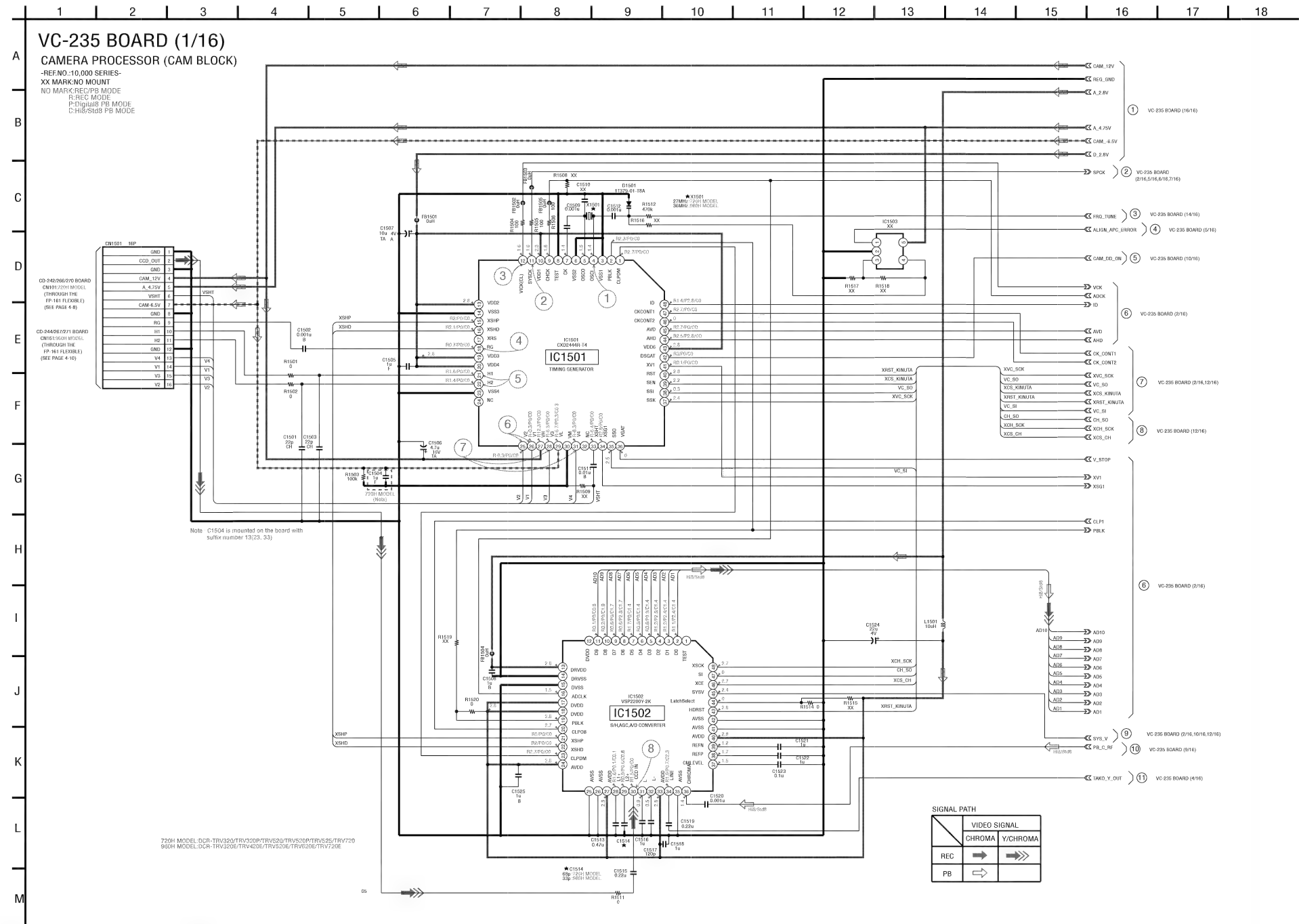


12(22,32)

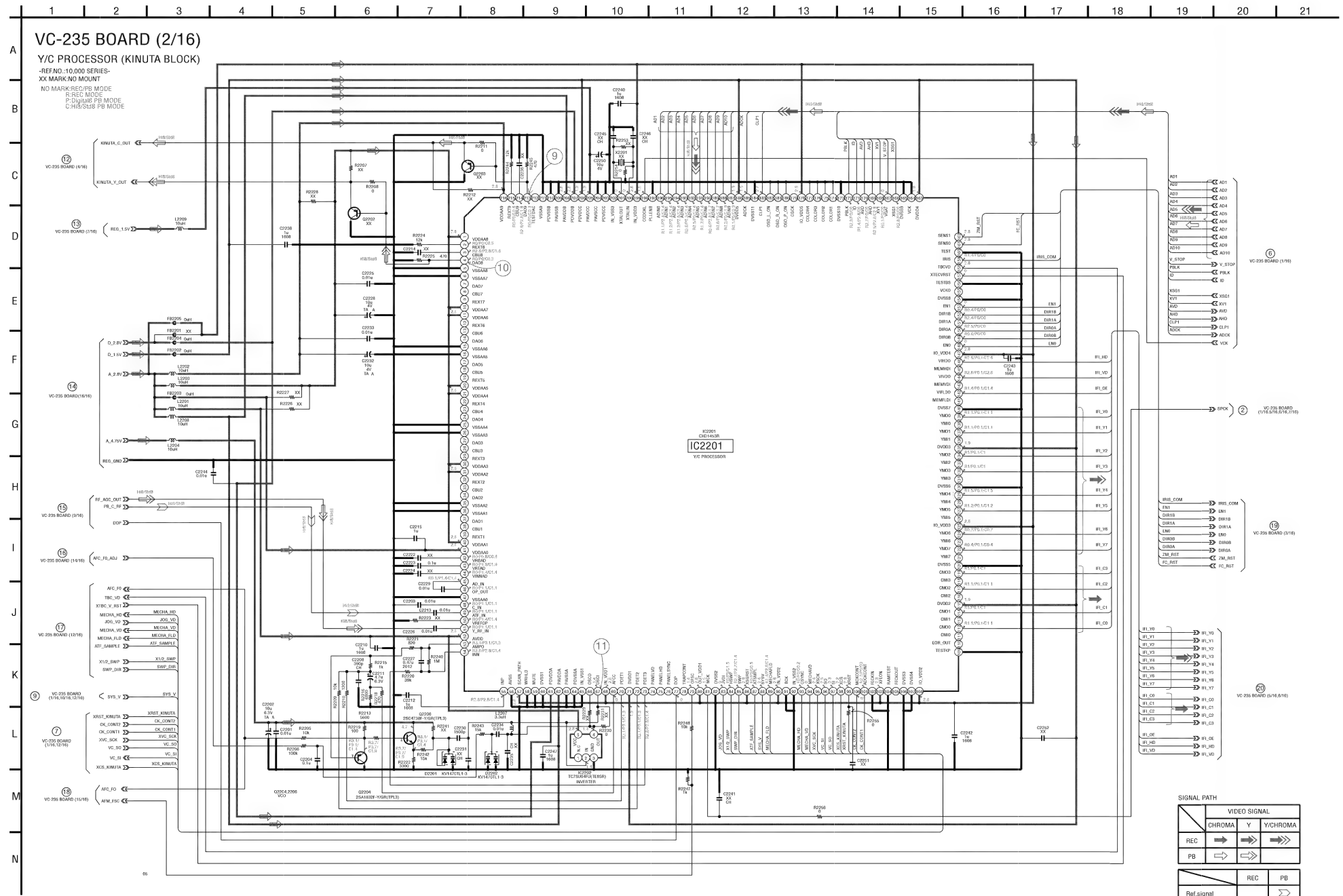
**CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT,
VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP,
HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER**

DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E

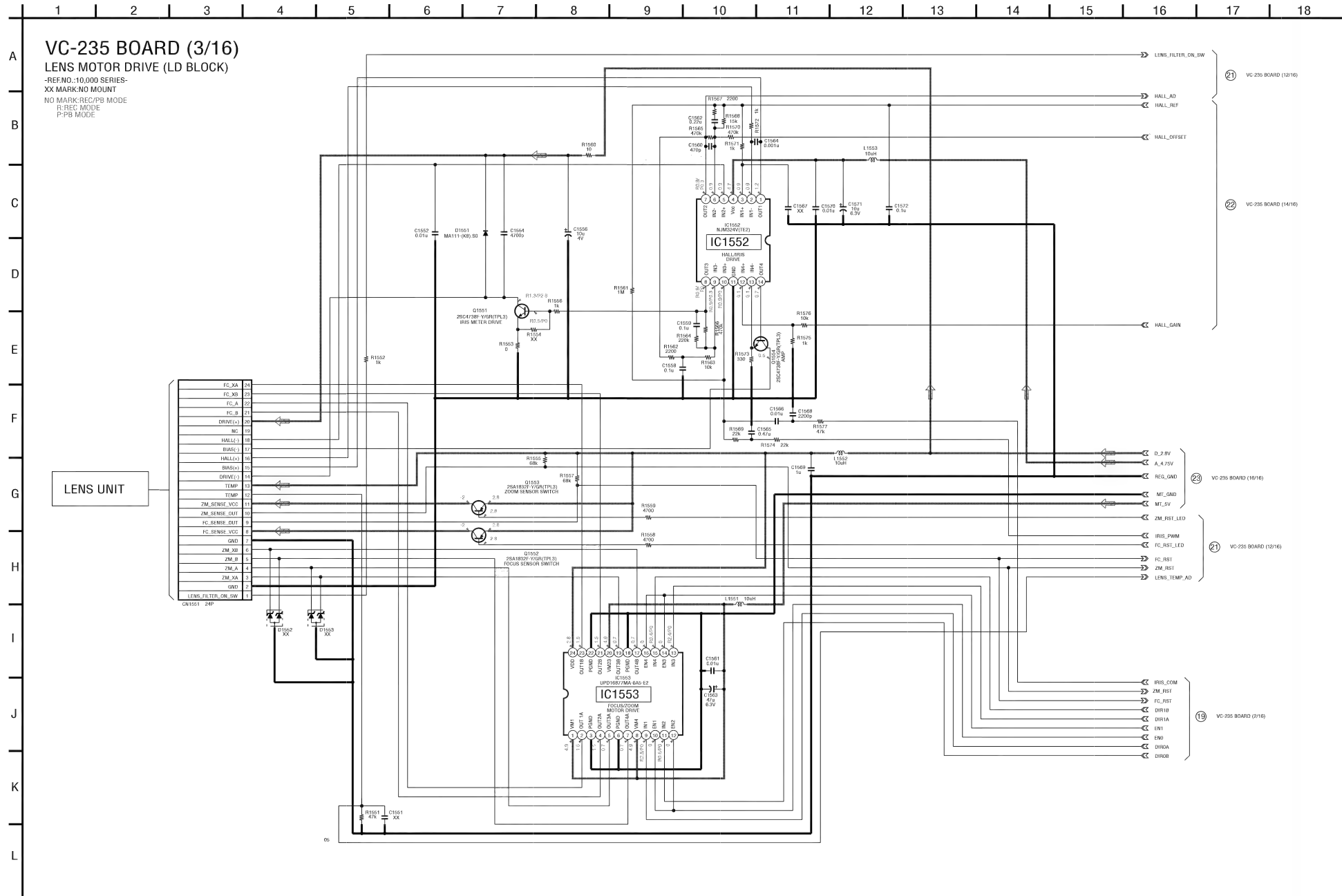
VC-235 (CAMERA PROCESSOR) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-119 for waveforms.



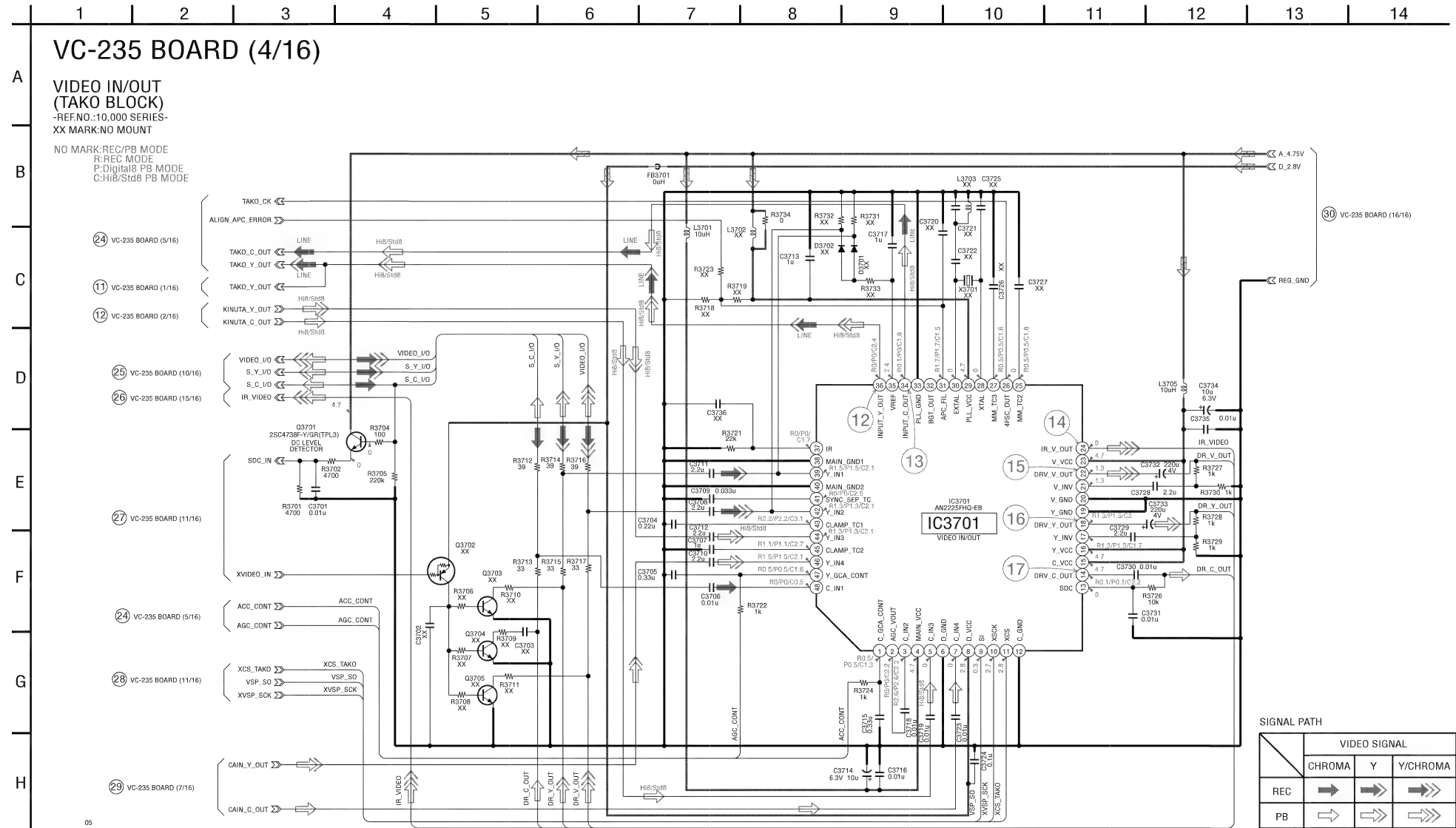
VC-235 (Y/C PROCESSOR) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-119, 120 for waveforms.



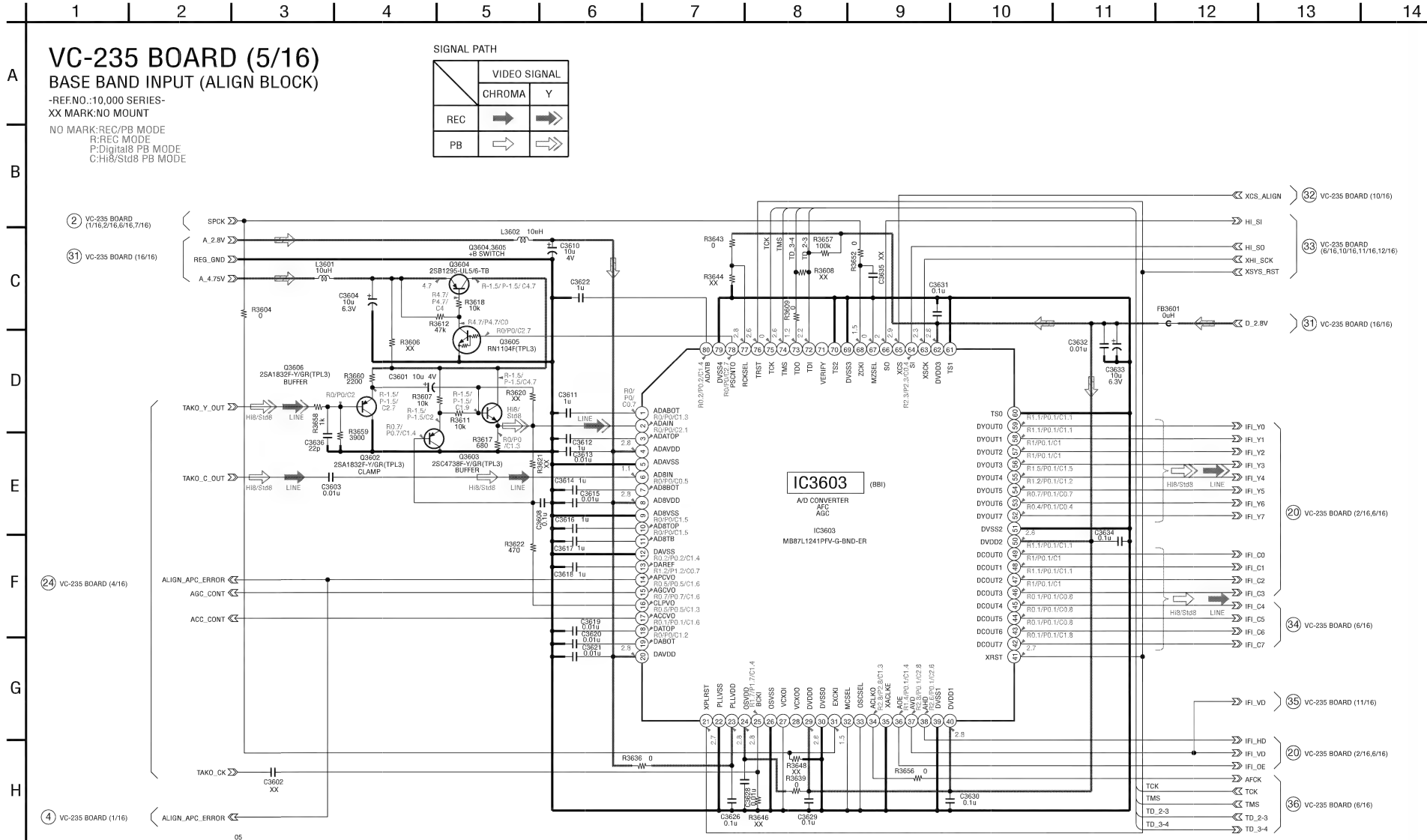
VC-235 (LENS MOTOR DRIVE) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.



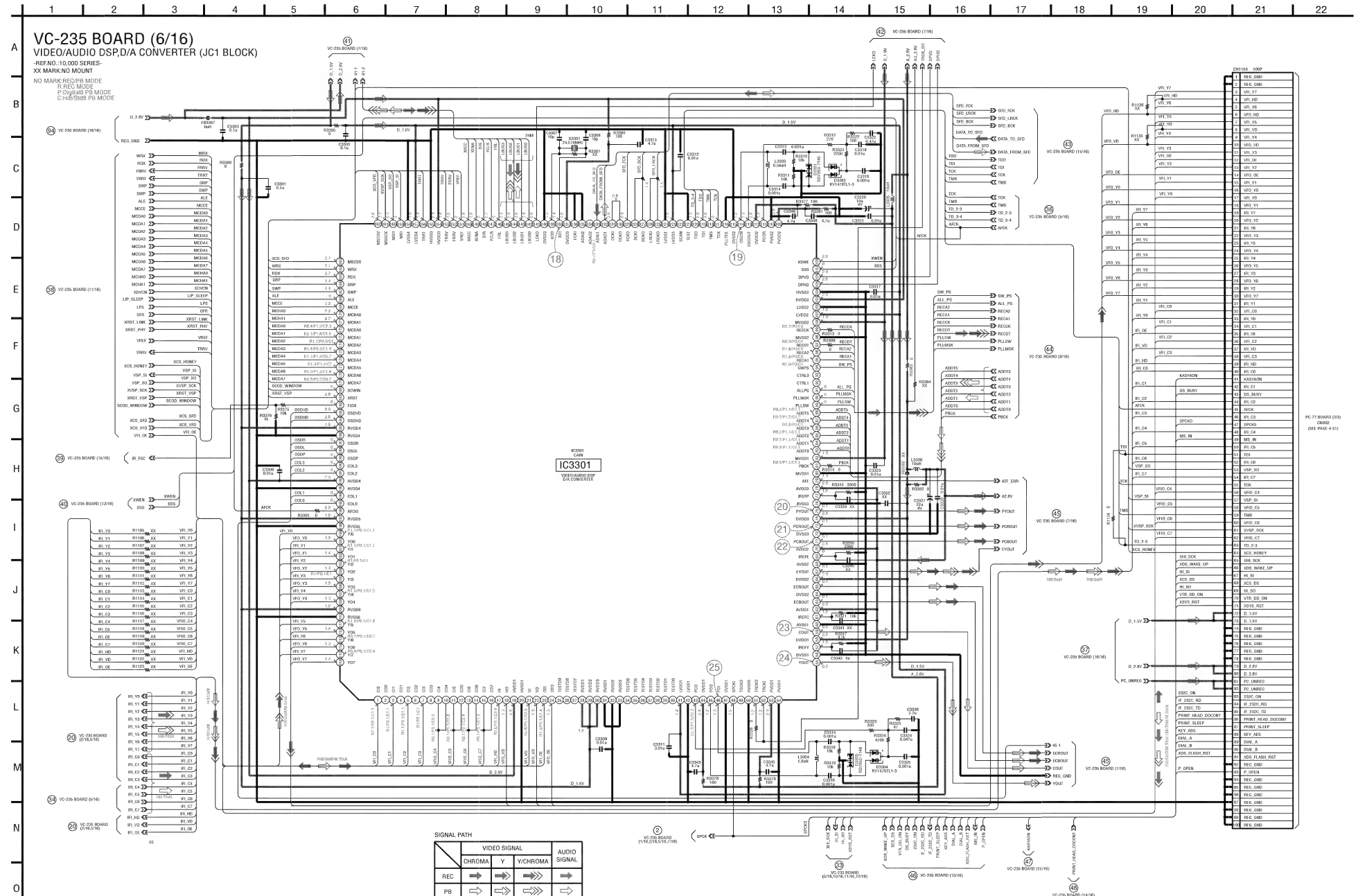
VC-235 (VIDEO IN/OUT) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-120 for waveforms.



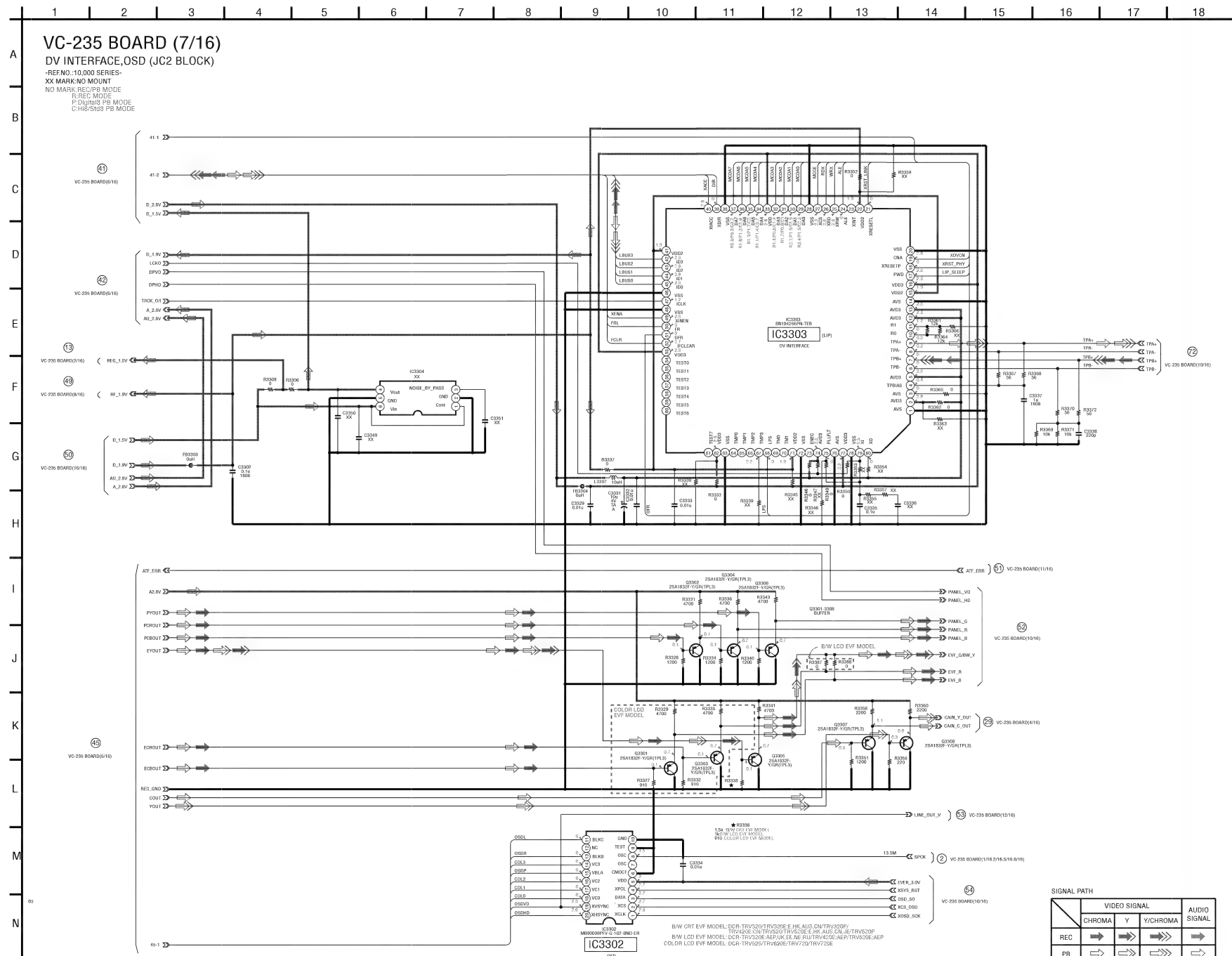
VC-235 (BASE BAND INPUT) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.



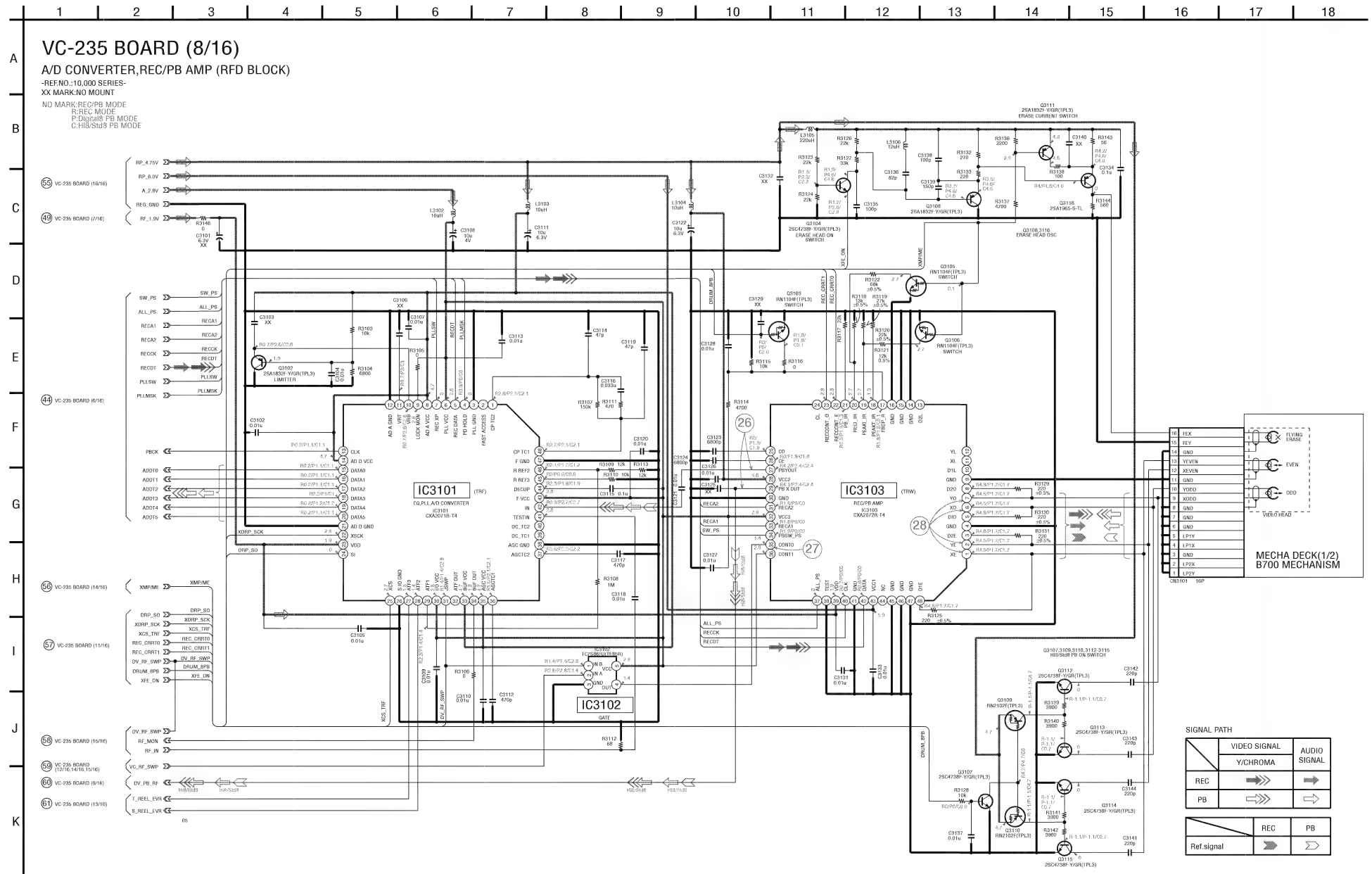
VC-235 (VIDEO/AUDIO DSP, D/A CONVERTER) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-120 for waveforms.



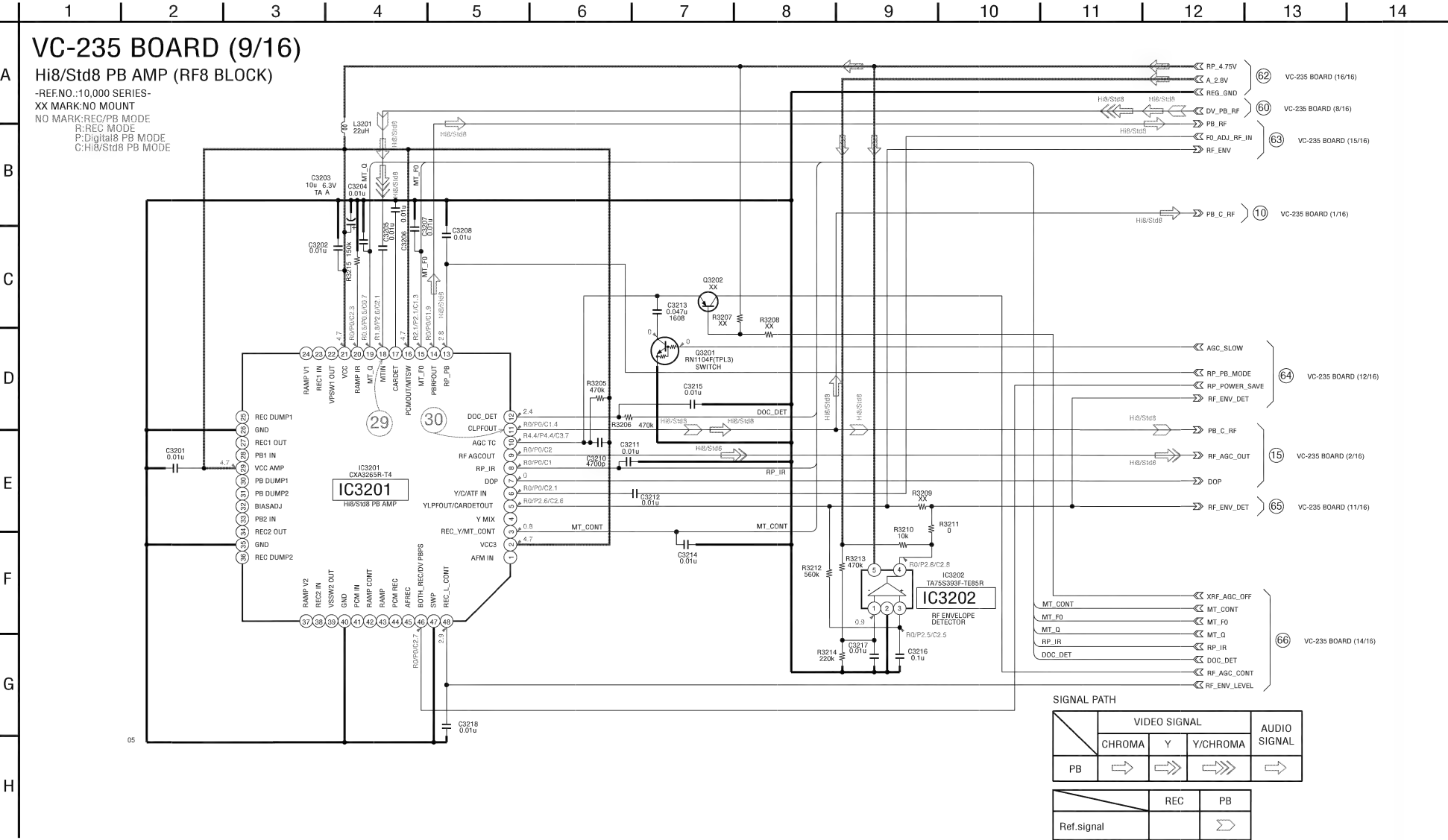
VC-235 (DV INTERFACE, OSD) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.



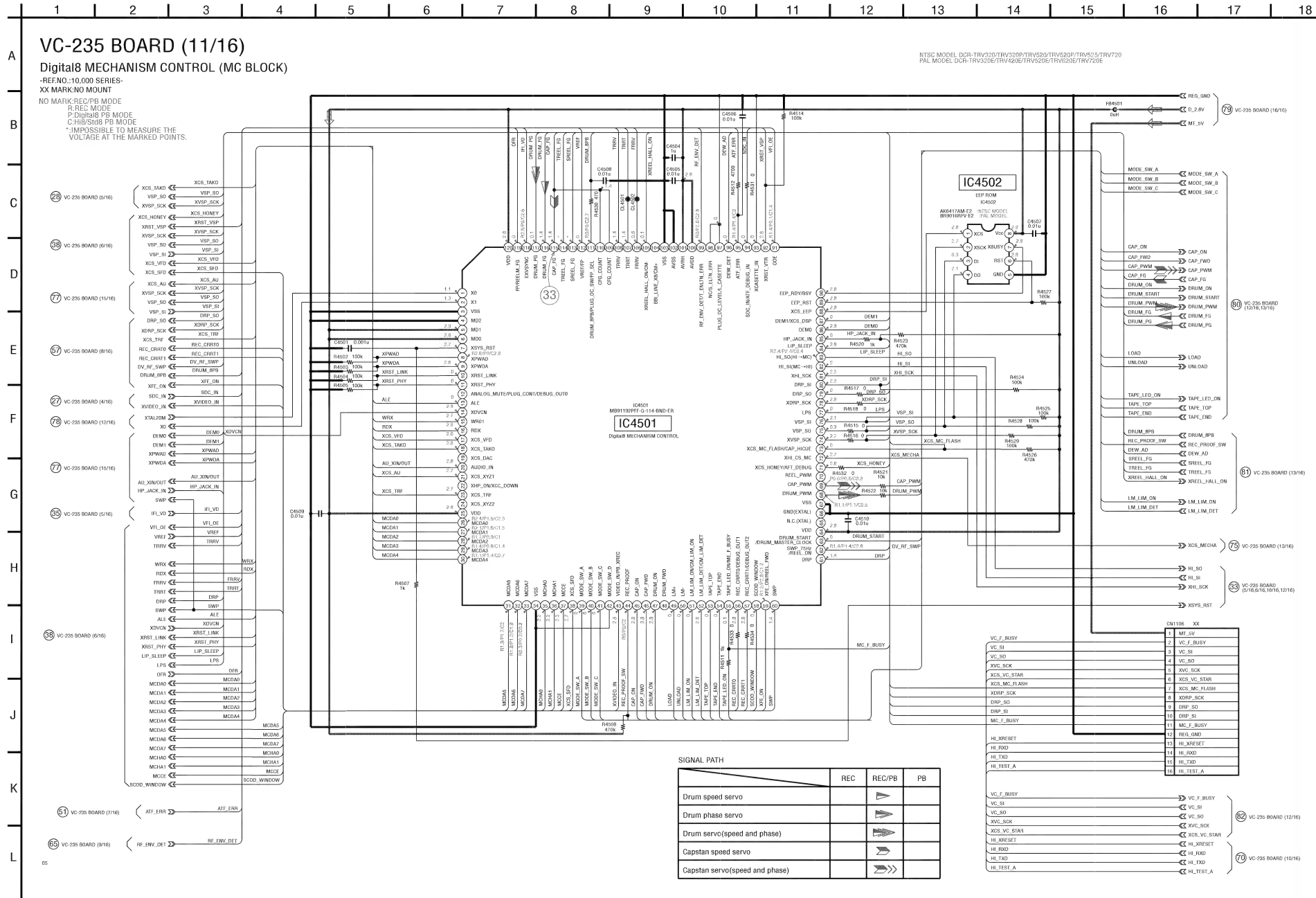
VC-235 (A/D CONVERTER, REC/PB AMP) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-120 for waveforms.



VC-235 (Hi8/Std8 PB AMP) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-120 for waveforms.



VC-235 (Digital8 MECHANISM CONTROL) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-120 for waveforms.



A CAMERA CONTROL
Hi8/Std8 MECHANISM CONTROL
(VC BLOCK)

NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE

C

1

D

1

1

E

1

1

—

+

4

1

1

J

K

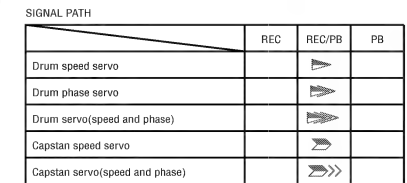
1

1

—

54

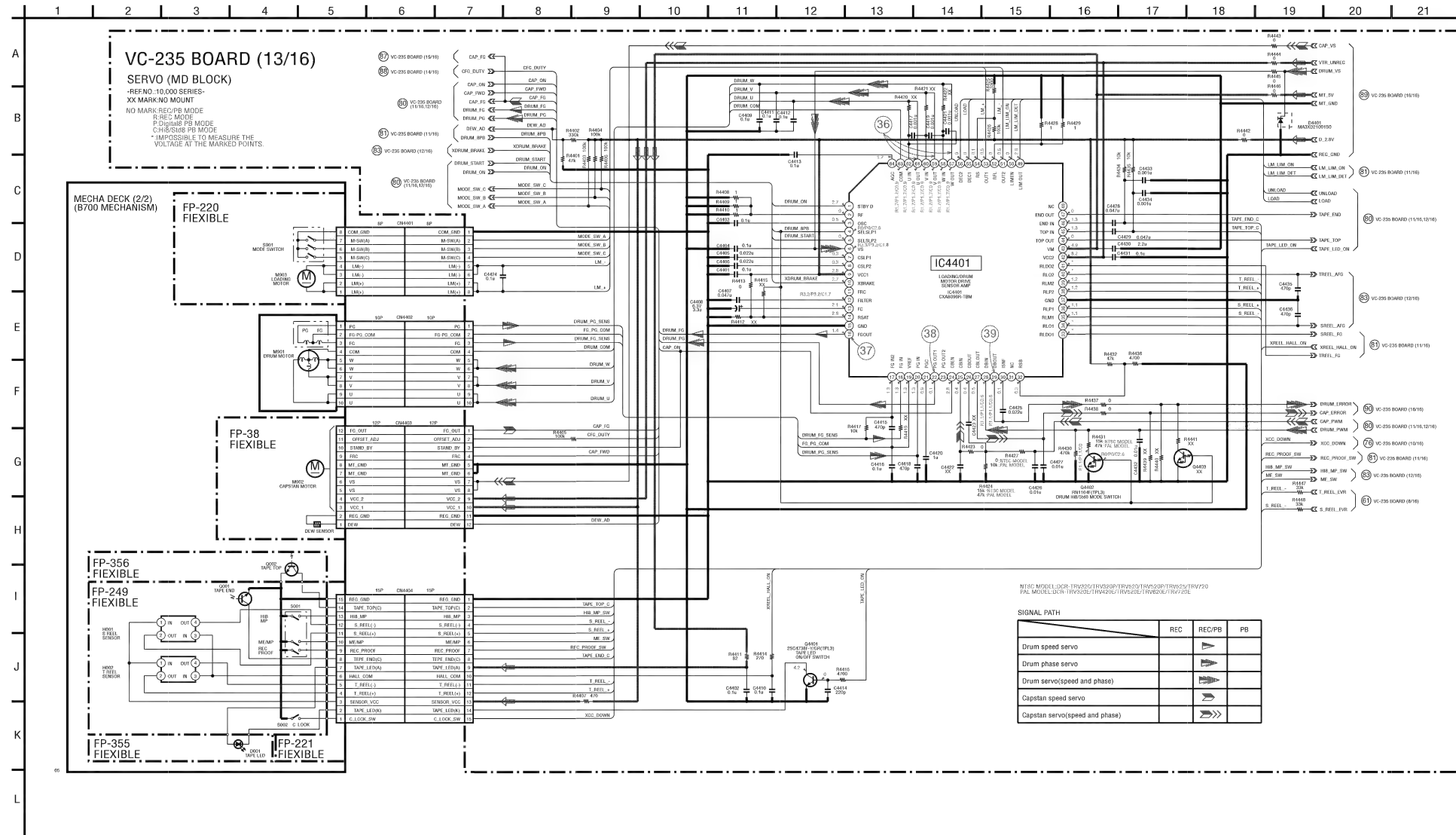
1



| MODEL | DCR-TRV320/TRV320P/ TRV520/TRV520P | DCR-TRV320E,E.H,K.AUS.CN/ TRV420E.CN/ TRV520E.E,H.K.AUS.CN,E | DCR-TRV320E.AEP,U.K,E,N,RU/ TRV420E.AEP/ TRV520E.AEP | DCR-TRV620/ TRV720E | DCR-TRV525/ TRV720 |
|----------|---------------------------------------|--|--|------------------------|-----------------------|
| REF. NO. | | | | | |
| R1127 | 56k | 10k | 22k | 47k | 100k |
| R1128 | 68k | 100k | 100k | 100k | 47k |
| R1131 | 68k | 100k | 100k | 100k | 68k |
| R1132 | 56k | 47k | 47k | 47k | 56k |

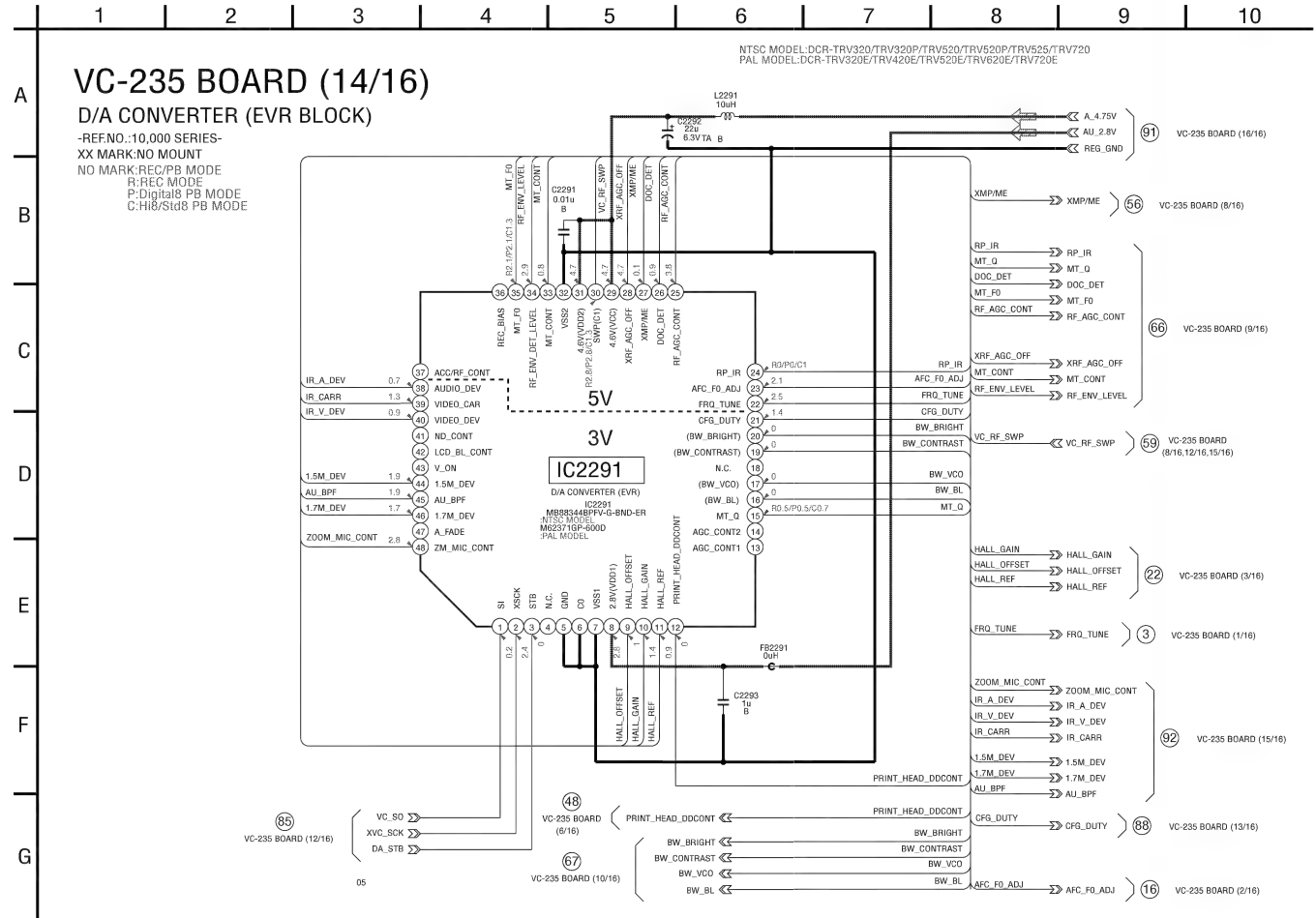
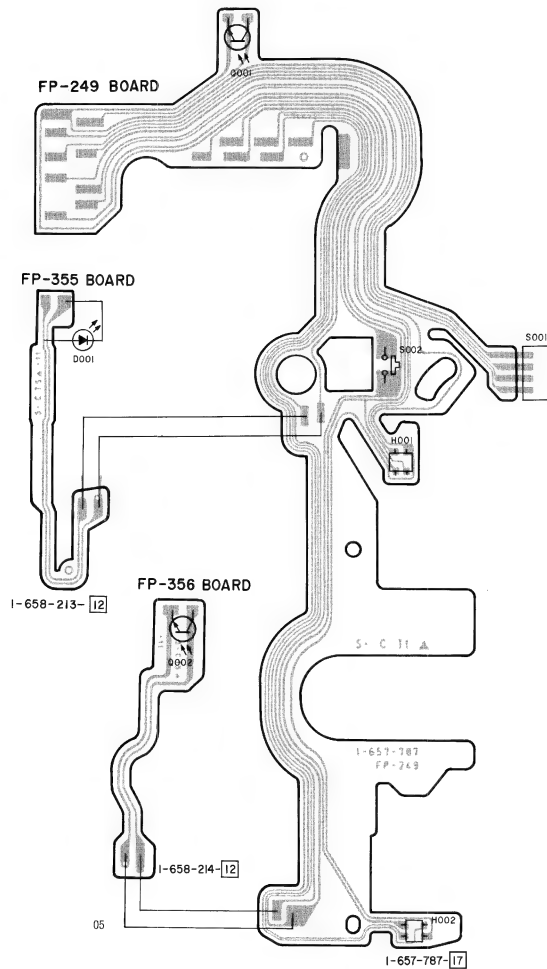
DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E

FP-38, FP-220, FP-221, FP-249, FP-355, FP-356 (MECHA DECK), VC-235 (SERVO) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-121 for waveforms.

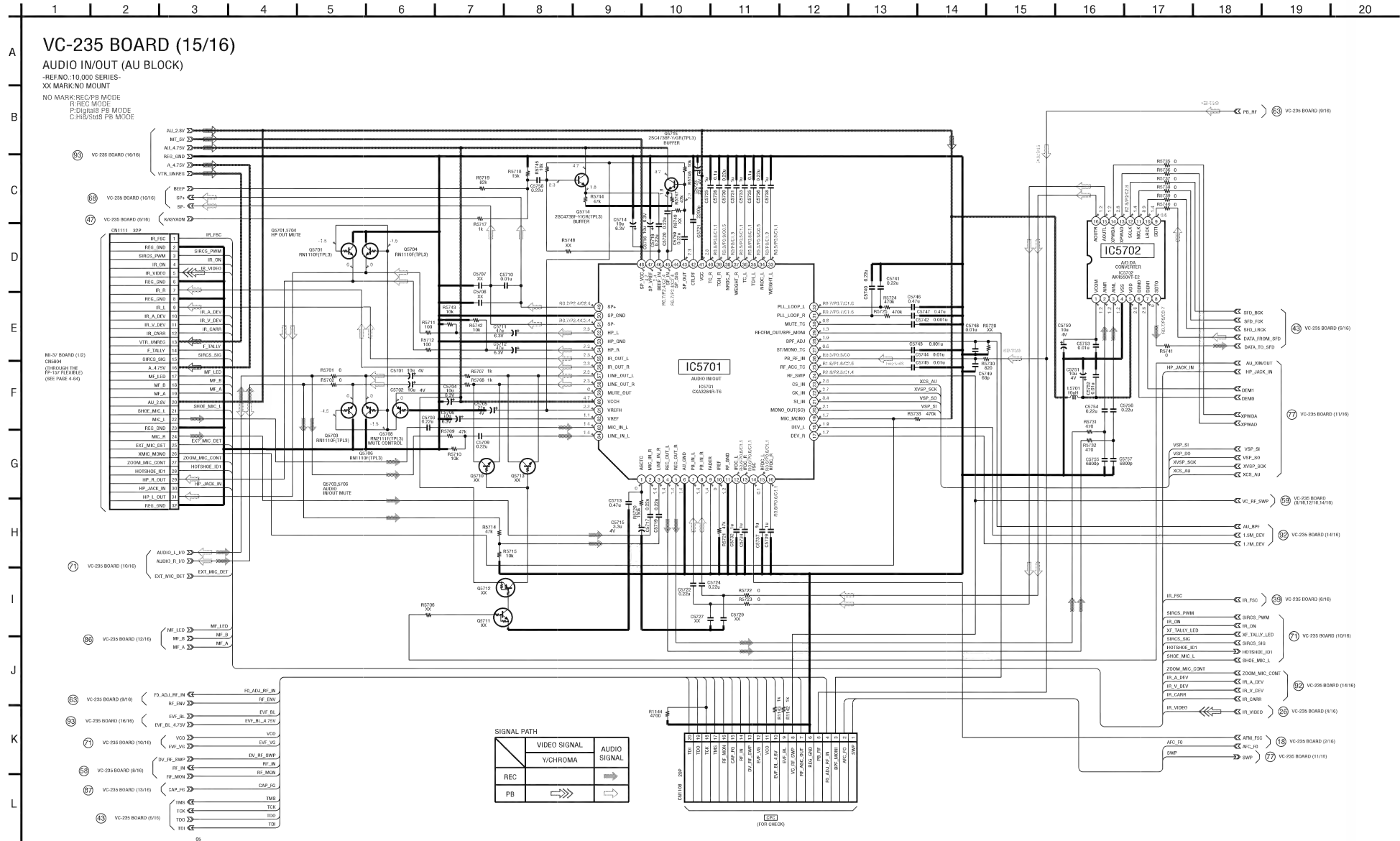


FP-249, FP-355, FP-356 (MECHA DECK) PRINTED WIRING BOARDS AND VC-235 (D/A CONVERTER) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.

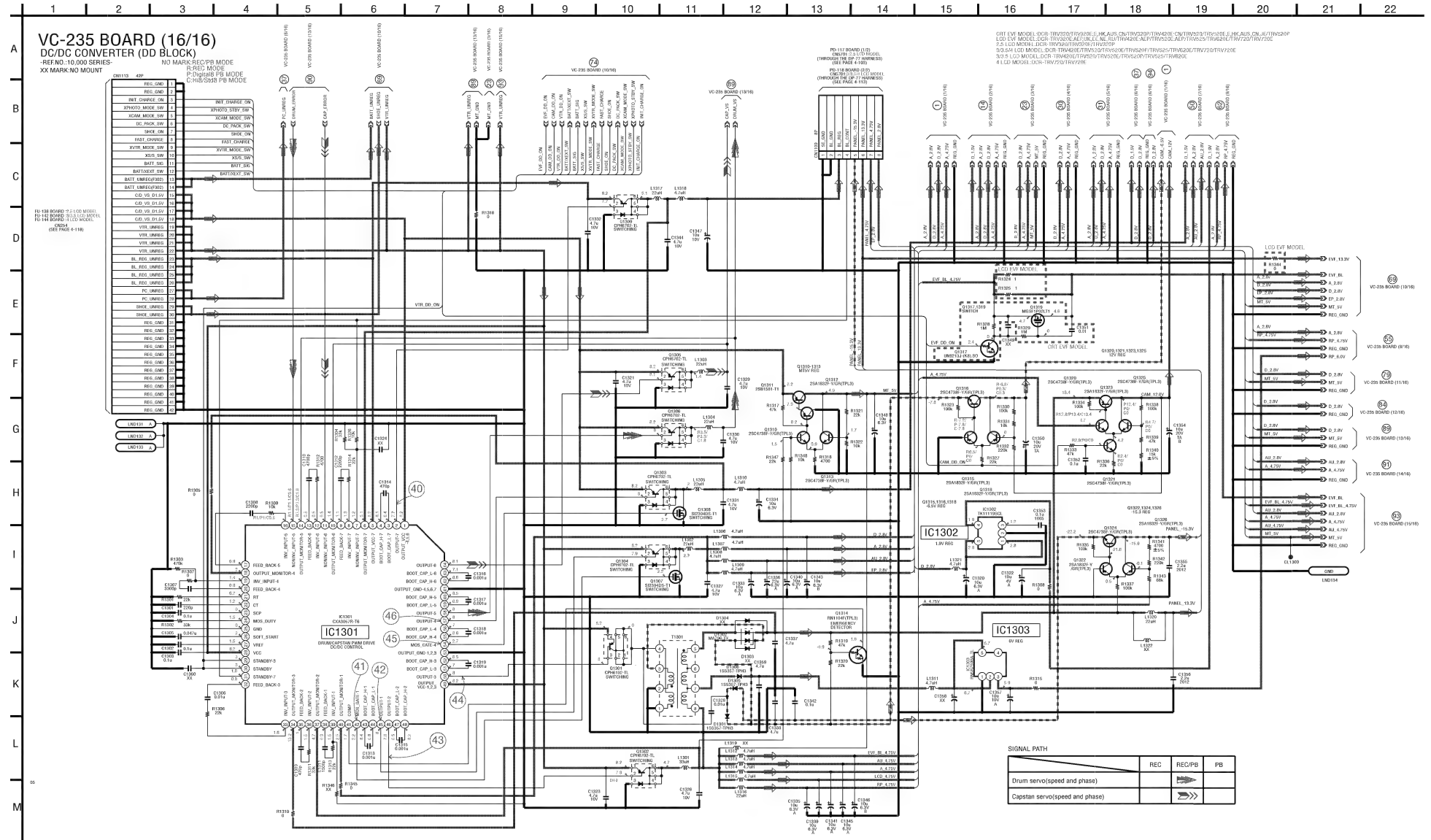
– Ref. No.: FP-249, FP-355, FP-356 flexible board; 10,000 series –



VC-235 (AUDIO IN/OUT) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.

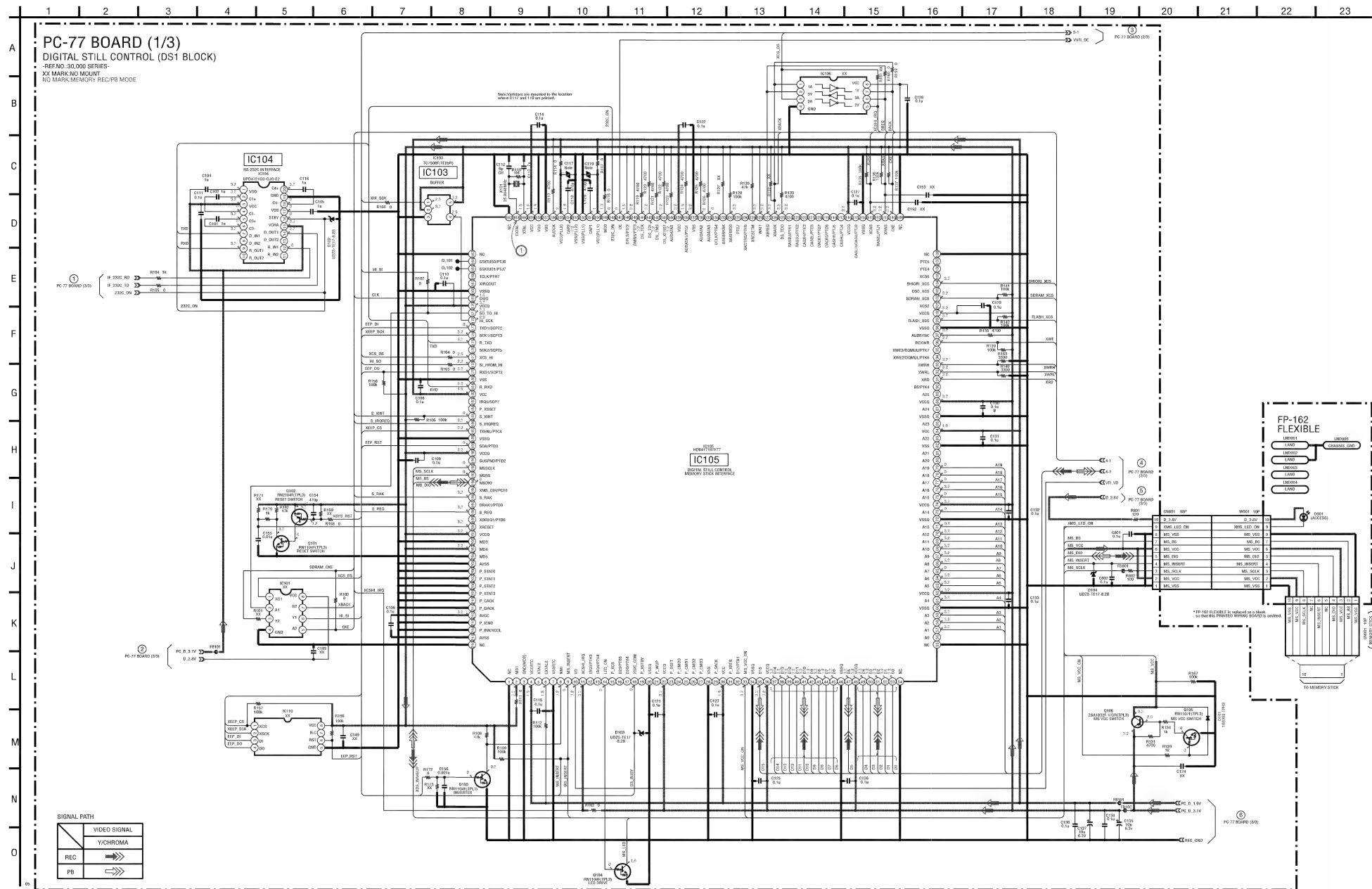


VC-235 (DC/DC CONVERTER) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-121 for waveforms.

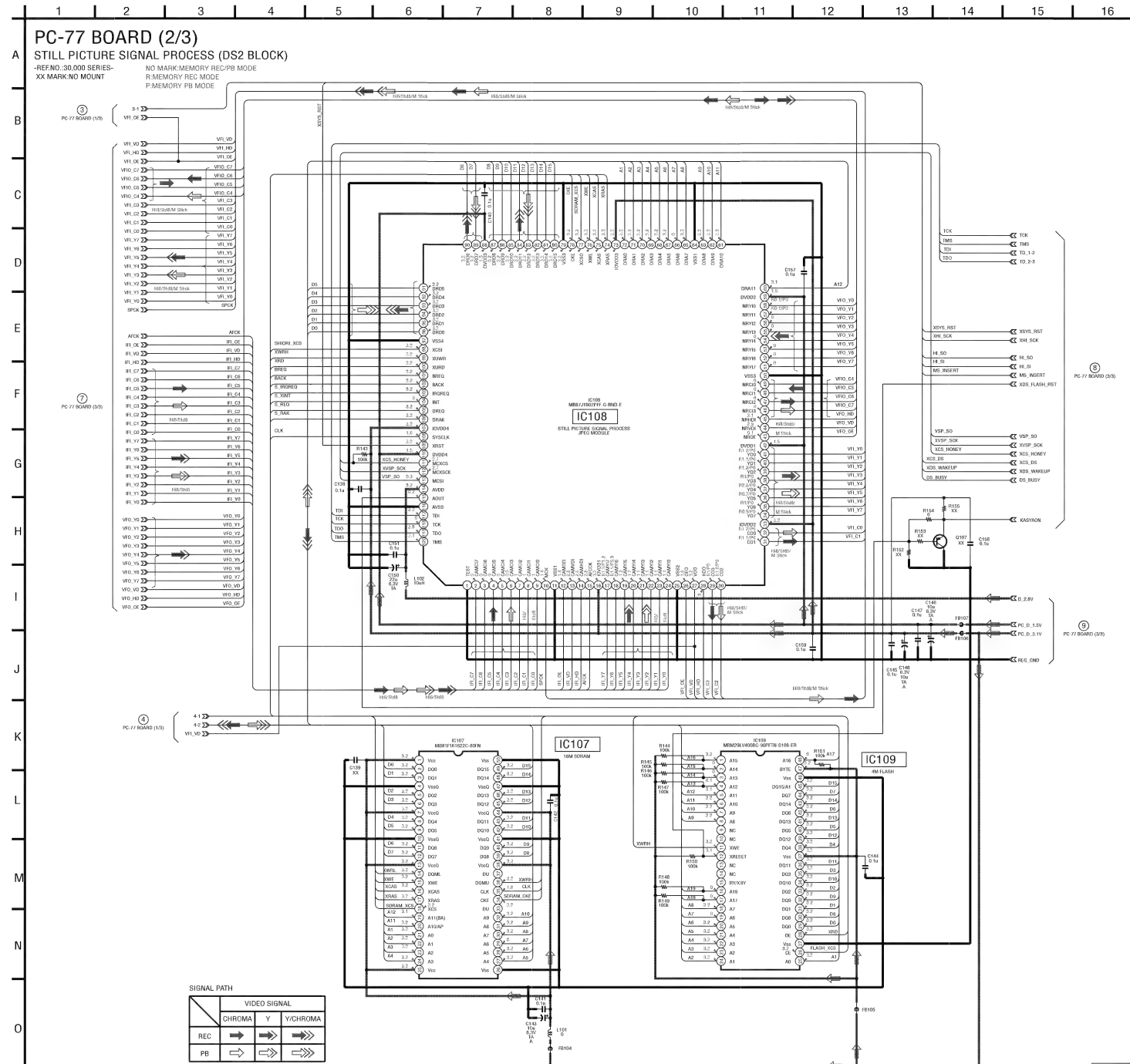


DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 TRV620E/TRV720/TRV720E

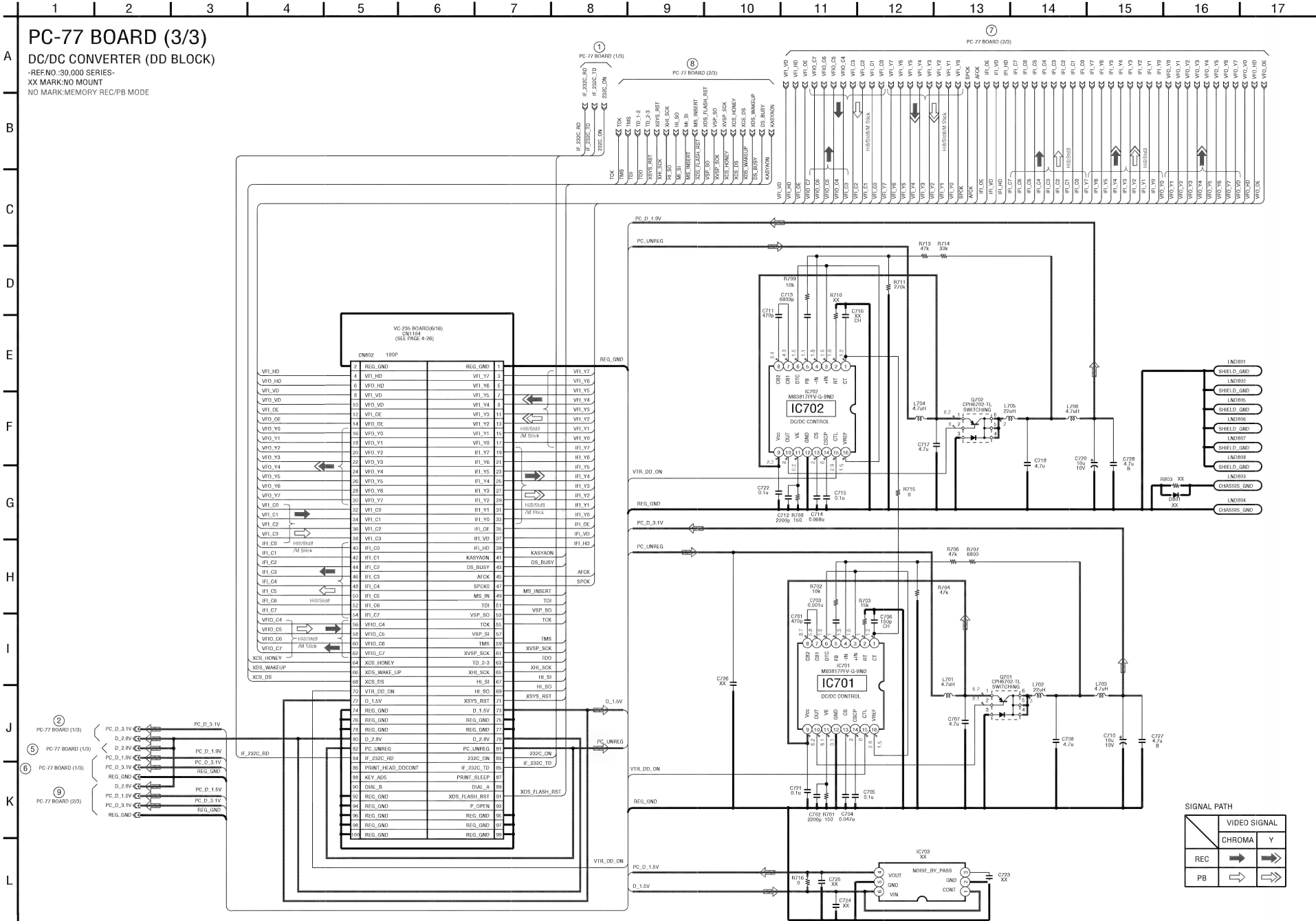
PC-77 (DIGITAL STILL CONTROL), FP-162 (MEMORY STICK BLOCK) SCHEMATIC DIAGRAM • See page 4-53 for PC-77 printed wiring board. • See page 4-121 for waveform.



PC-77 (STILL PICTURE SIGNAL PROCESS) SCHEMATIC DIAGRAM • See page 4-53 for PC-77 printed wiring board.



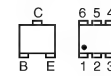
PC-77 (DC/DC CONVERTER) SCHEMATIC DIAGRAM



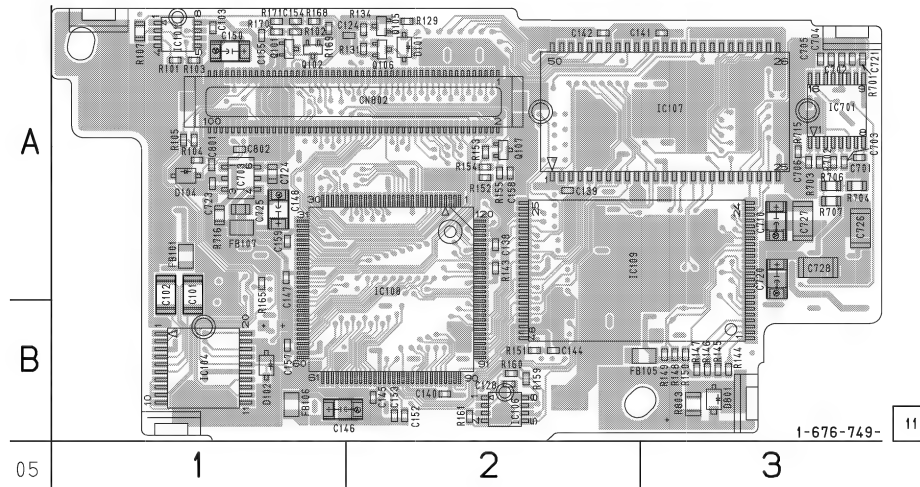
PC-77 (DIGITAL STILL CONTROL, STILL PICTURE SIGNAL PROCESS) PRINTED WIRING BOARD

— Ref. No.: PC-77 board; 30,000 series —

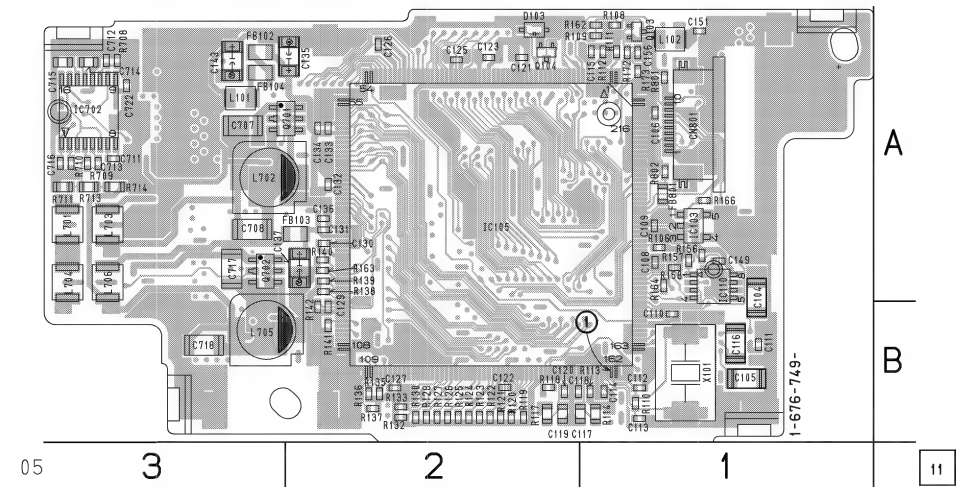
- For Printed Wiring Board.
- PC-77 board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-125 for printed parts location.
- Chip transistor



PC-77 BOARD (SIDE A)



PC-77 BOARD (SIDE B)

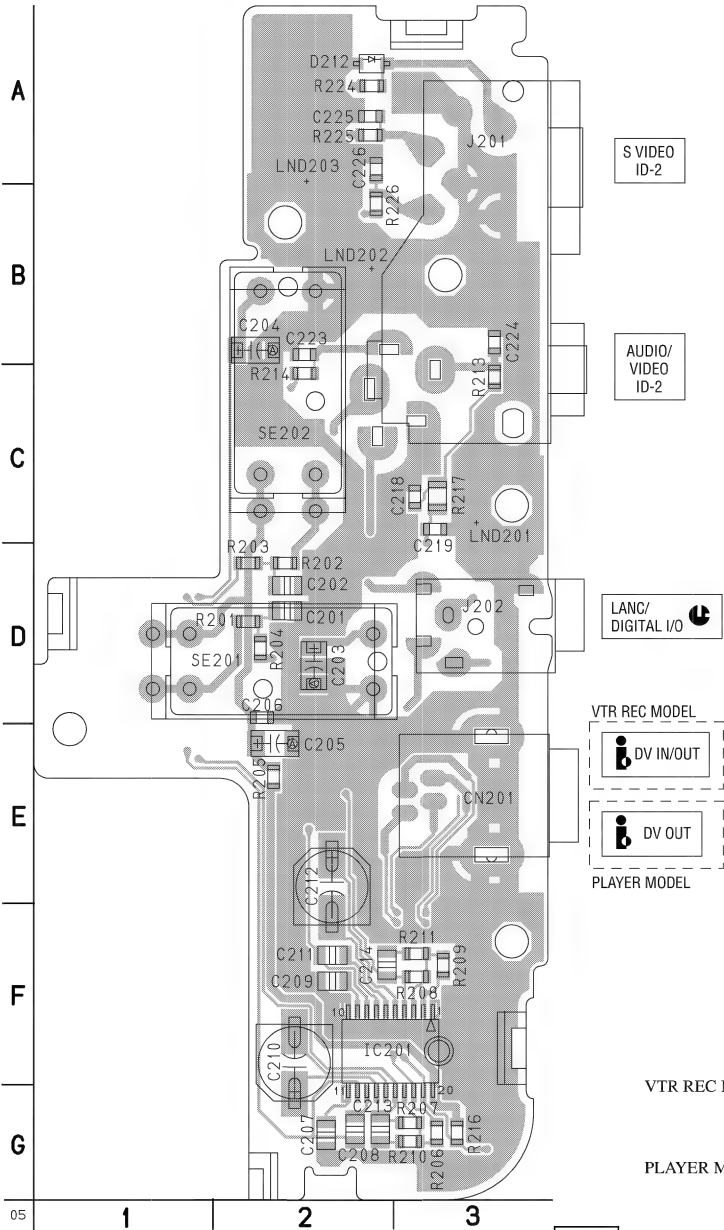


DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E

SE-104/112/114 (STEADYSHOT, AV IN/OUT) PRINTED WIRING BOARD

– Ref. No.: SE-104/112/114 board; 20,000 series –

SE-104/112/114 BOARD (SIDE A)



S VIDEO
ID-2

AUDIO/
VIDEO
ID-2

LANG/
DIGITAL I/O

VTR REC MODEL
DV IN/OUT
DV OUT
PLAYER MODEL

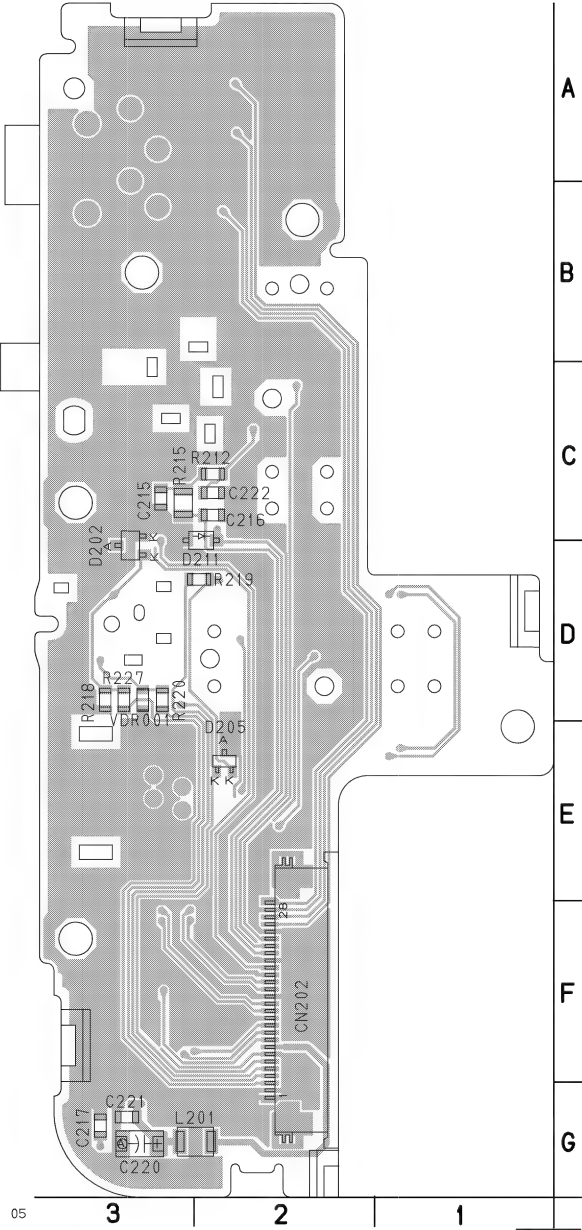
VTR REC MODEL: DCR-TRV320/TRV320E: E, HK, AUS, CN/
TRV320P/TRV420E: CN/TRV520/TRV520E: E,
HK, AUS, CN, JE/TRV520P/TRV525/TRV620E/
TRV720/TRV720E
PLAYER MODEL: DCR-TRV320E: AEP, UK, EE, NE, RU/
TRV420E: AEP/TRV520E: AEP

SE-104: 1-676-772-
SE-112: 1-676-758-
SE-114: 1-676-765-

STEADYSHOT, AV IN/OUT
SE-104/112/114

- For Printed Wiring Board.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-126 for printed parts location.

SE-104/112/114 BOARD (SIDE B)



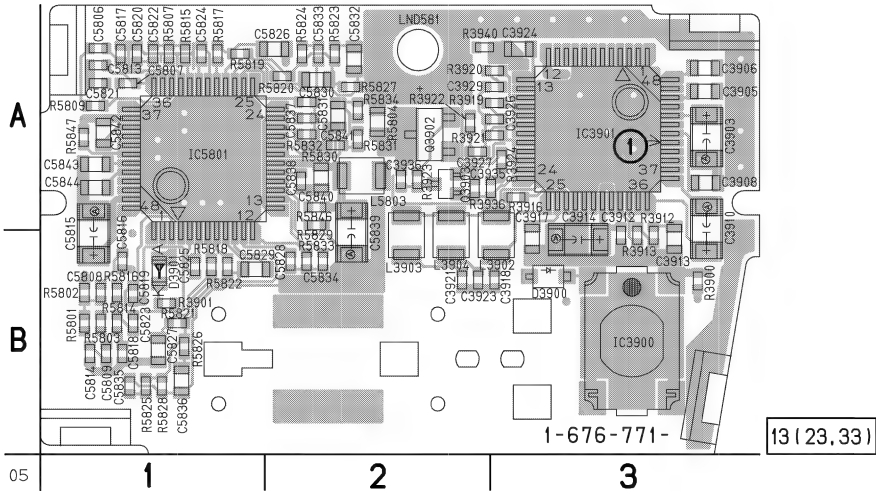
SE-104: 1-676-772-
SE-112: 1-676-758-
SE-114: 1-676-765-

FP-156 (MIC/HP JACK, MF SENSOR), MI-37 (STEREO MIC AMP, IR TRANSMITTER) PRINTED WIRING BOARDS
– Ref. No.: FP-156 flexible board; 10,000/MI-37 board; 10,000 series –

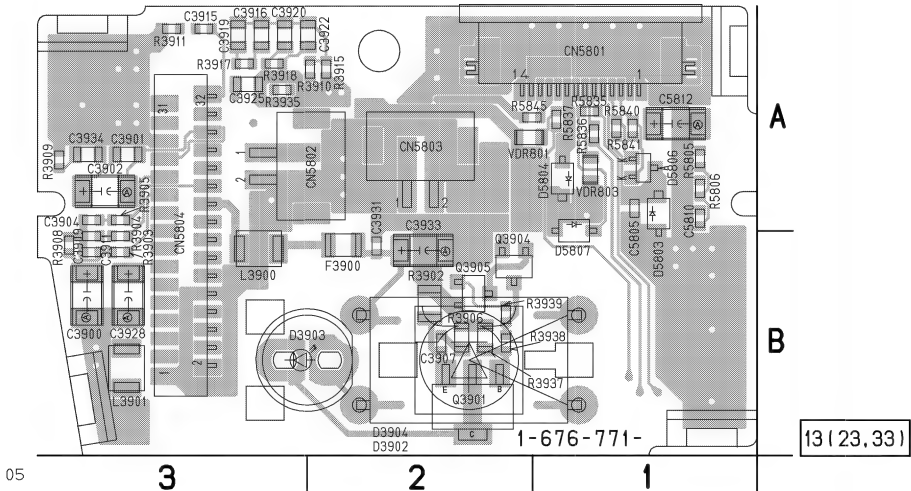
- For Printed Wiring Board.
- MI-37 board is eight-layer print board. However, the patterns of layers 2 to 7 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-126 for printed parts location.
- Chip transistor

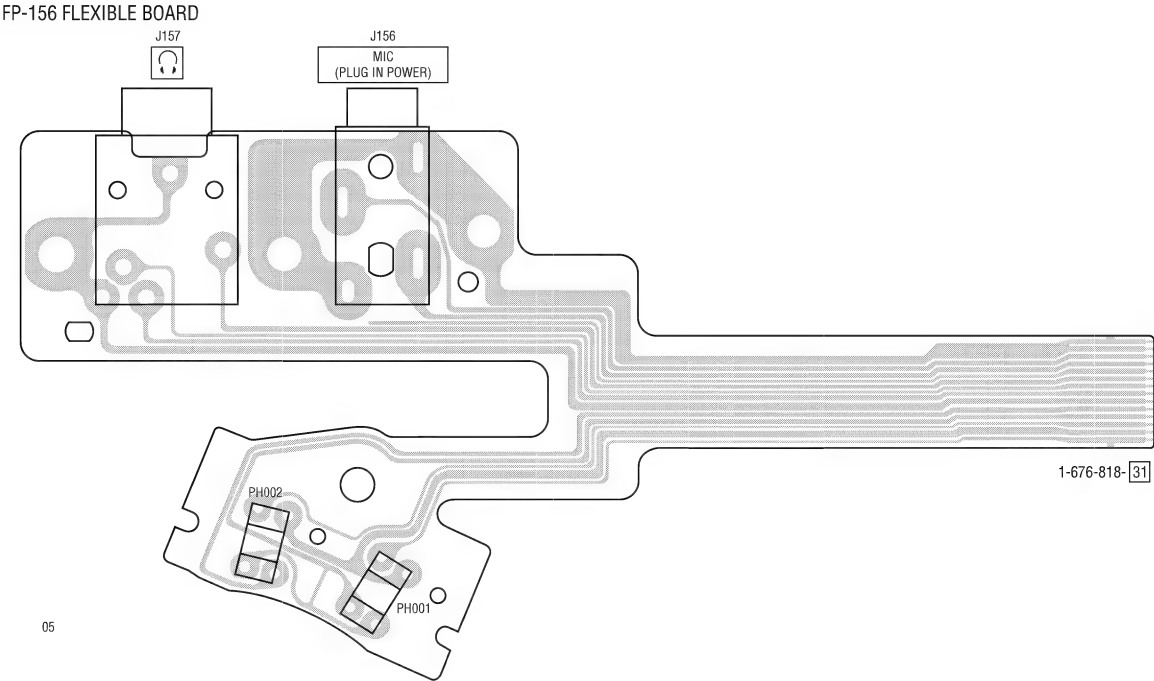


MI-37 BOARD (SIDE A)



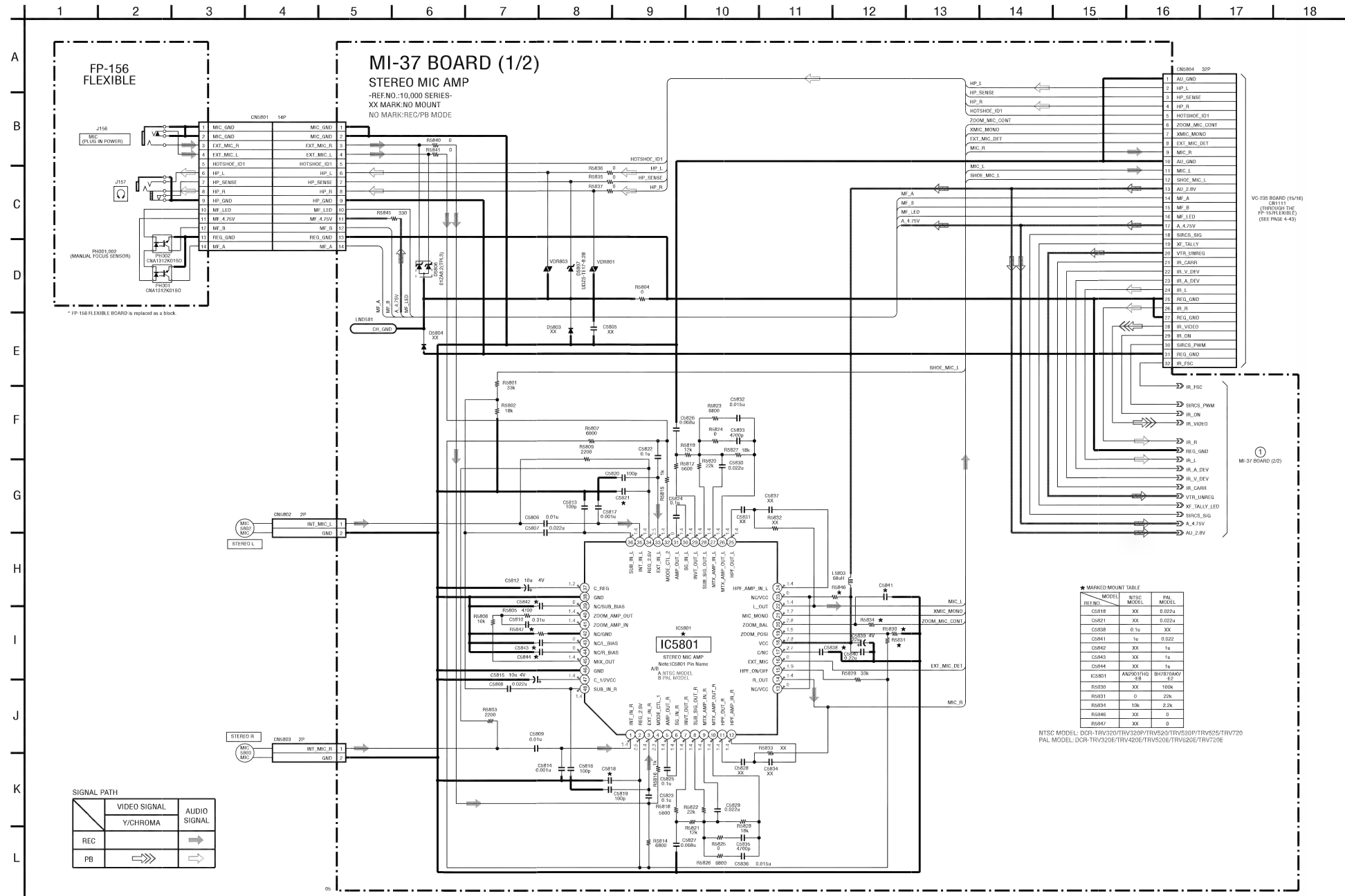
MI-37 BOARD (SIDE B)



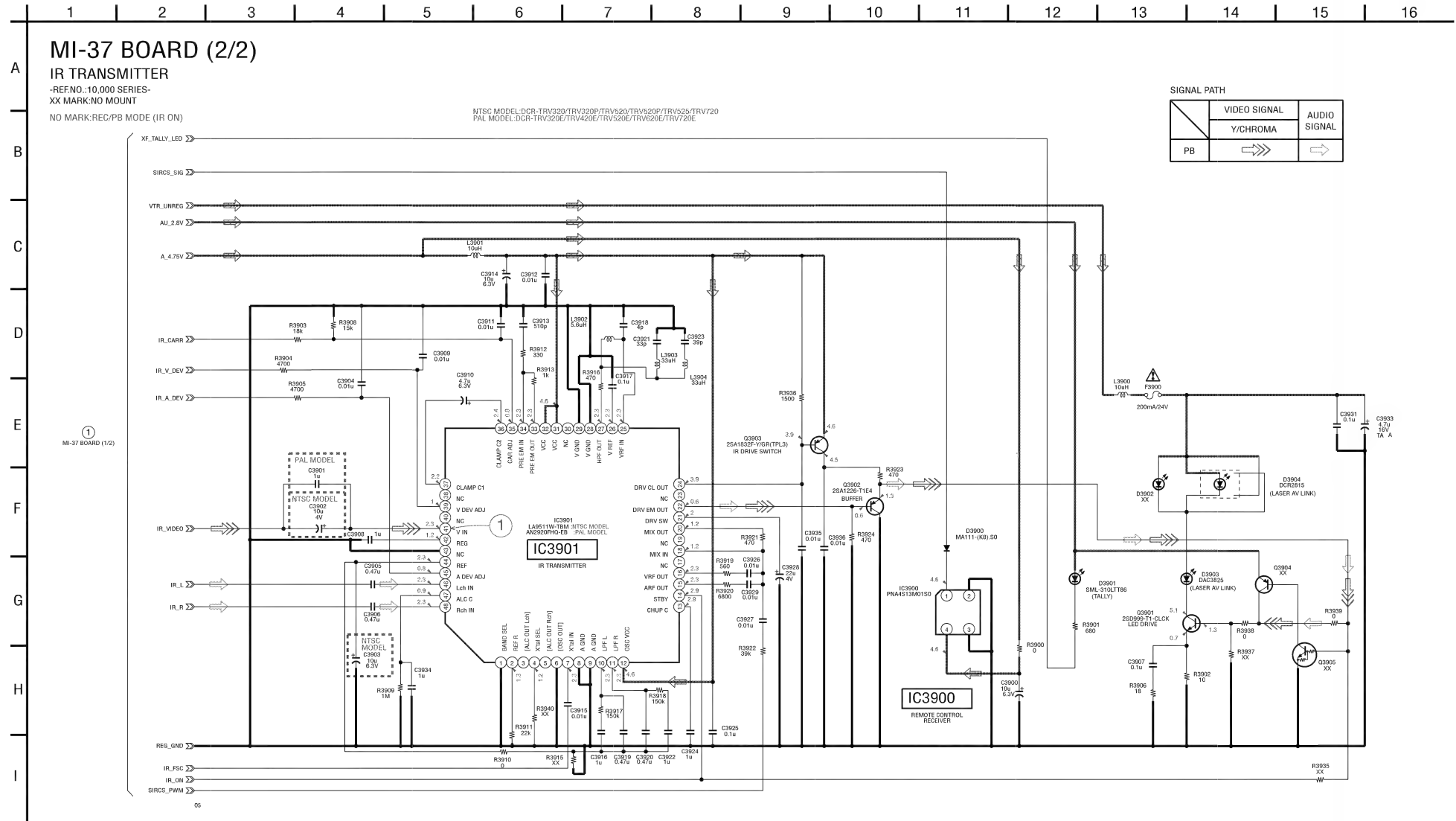




DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 TRV620E/TRV720/TRV720E

FP-156 (MIC/HP JACK, MF SENSOR), MI-37 (STEREO MIC AMP) SCHEMATIC DIAGRAM • See page 4-59 for FP-156 and MI-37 printed wiring boards.



MI-37 (IR TRANSMITTER) SCHEMATIC DIAGRAM • See page 4-59 for MI-37 printed wiring board. • See page 4-122 for waveform.



The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CF-69 (USER CONTROL) PRINTED WIRING BOARD

– Ref. No.: CF-69 board; 20,000 series –

– DCR-TRV320/TRV320E/TRV320P –

• **For Printed Wiring Board.**

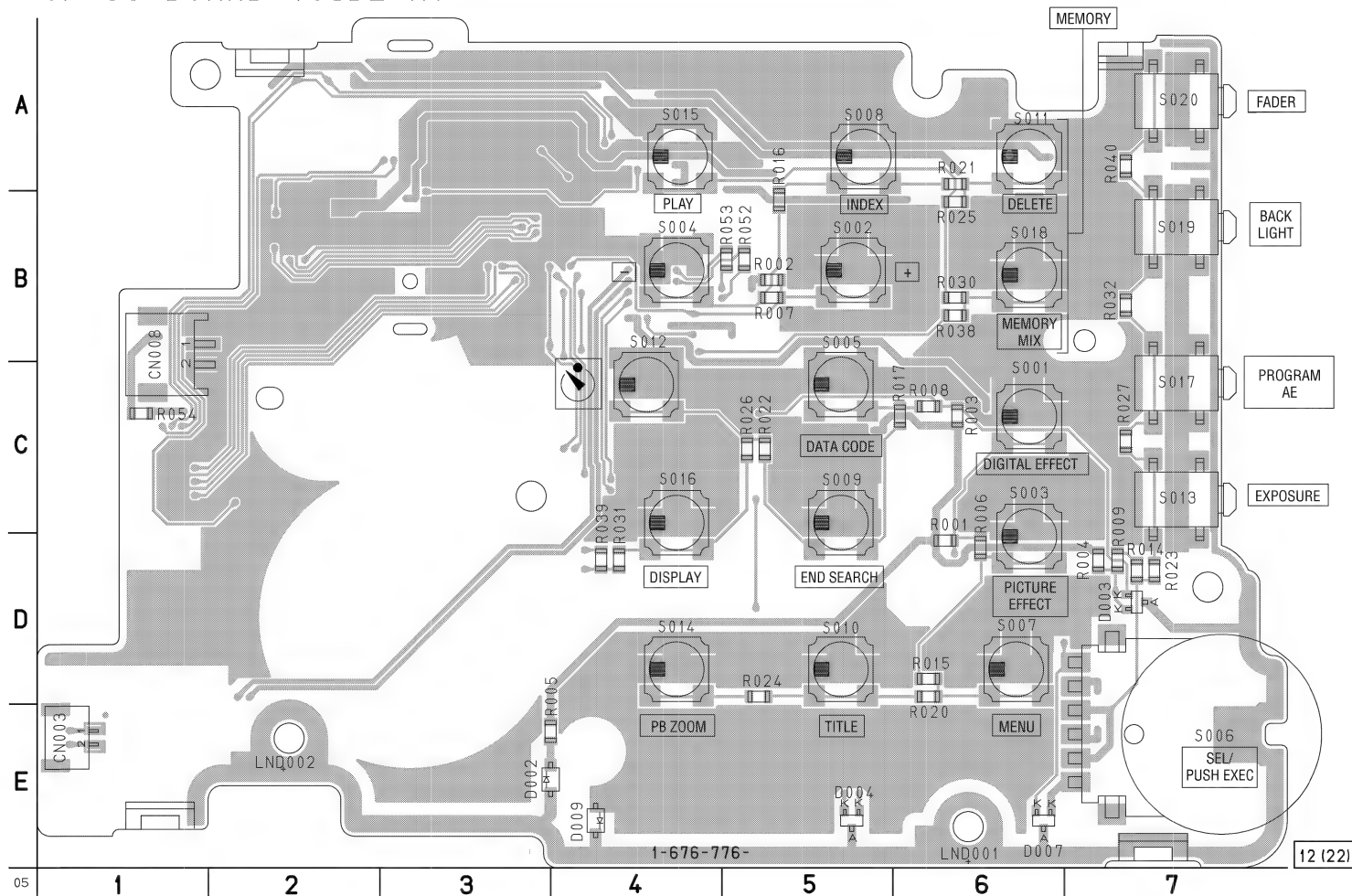
• There are few cases that the part isn't mounted in this model is printed on this diagram.

• See page 4-126 for printed parts location.

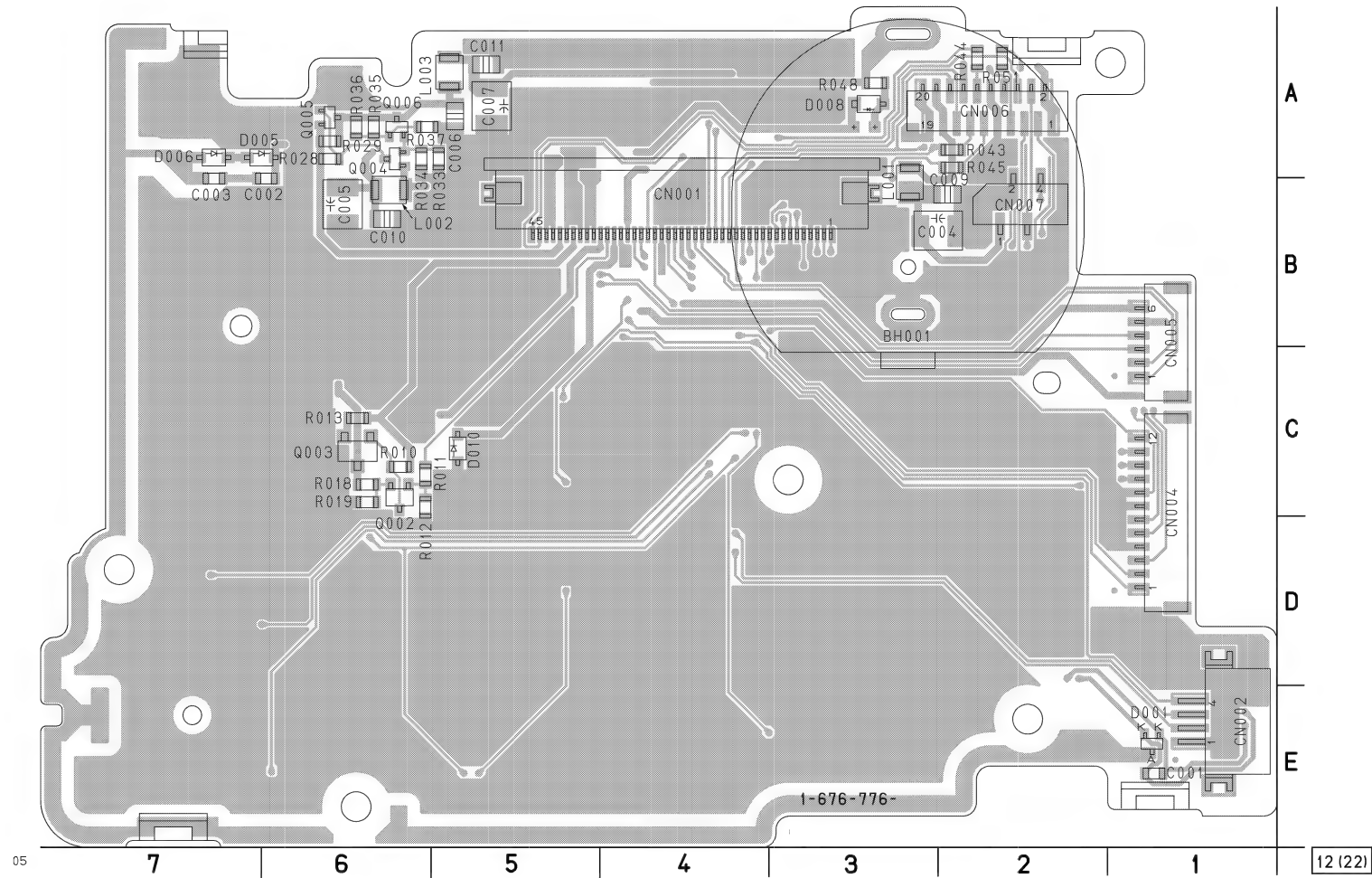
• Chip transistor



CF-69 BOARD (SIDE A)

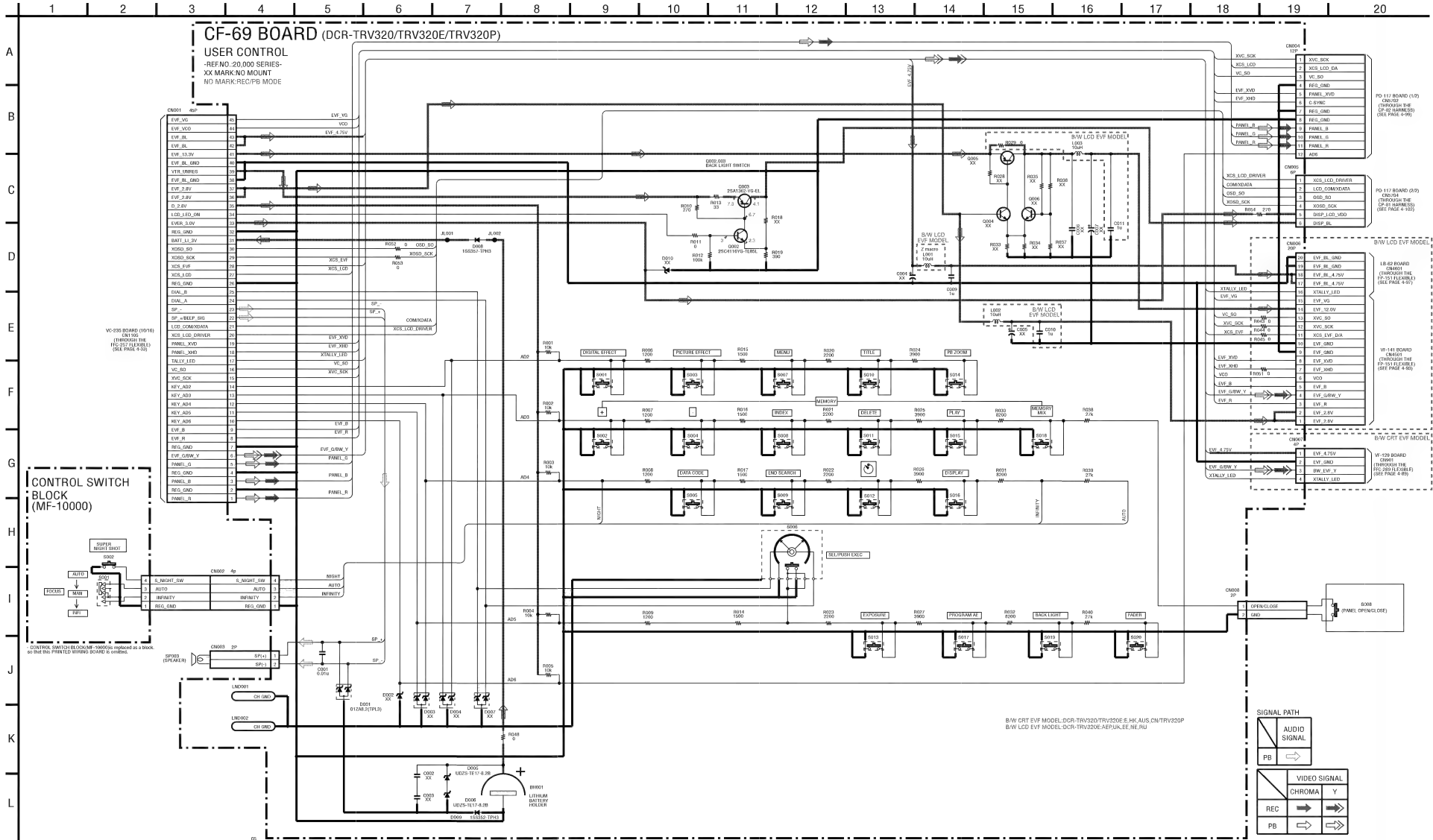


CF-69 BOARD (SIDE B)

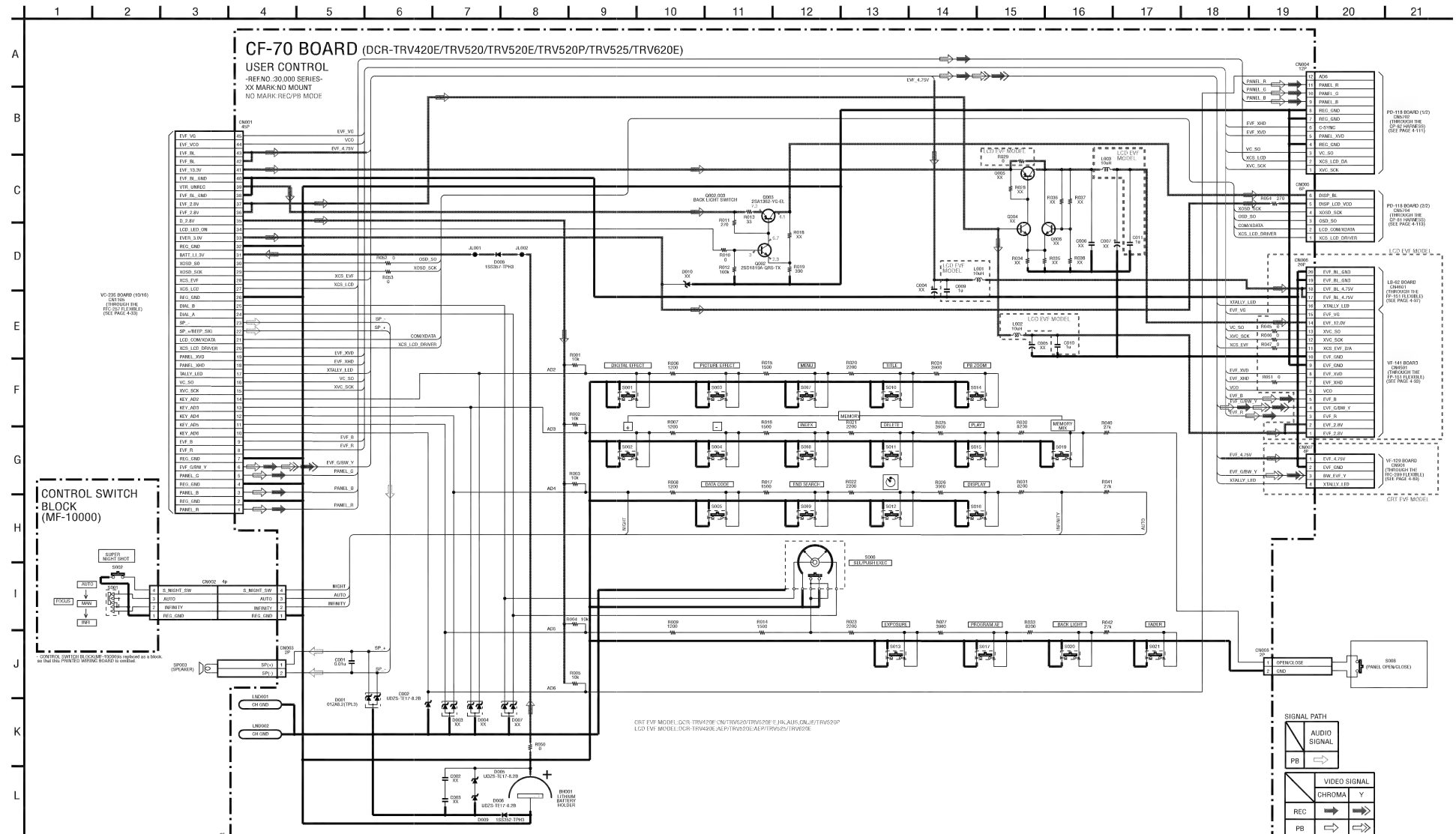


DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E

MF-10000 (CONTROL SWITCH BLOCK), CF-69 (USER CONTROL) SCHEMATIC DIAGRAM • See page 4-67 for CF-69 printed wiring board.



MF-10000 (CONTROL SWITCH BLOCK), CF-70 (USER CONTROL) SCHEMATIC DIAGRAM • See page 4-75 for CF-70 printed wiring board.



CF-70 (USER CONTROL) PRINTED WIRING BOARD

– Ref. No.: CF-70 board; 30,000 series –

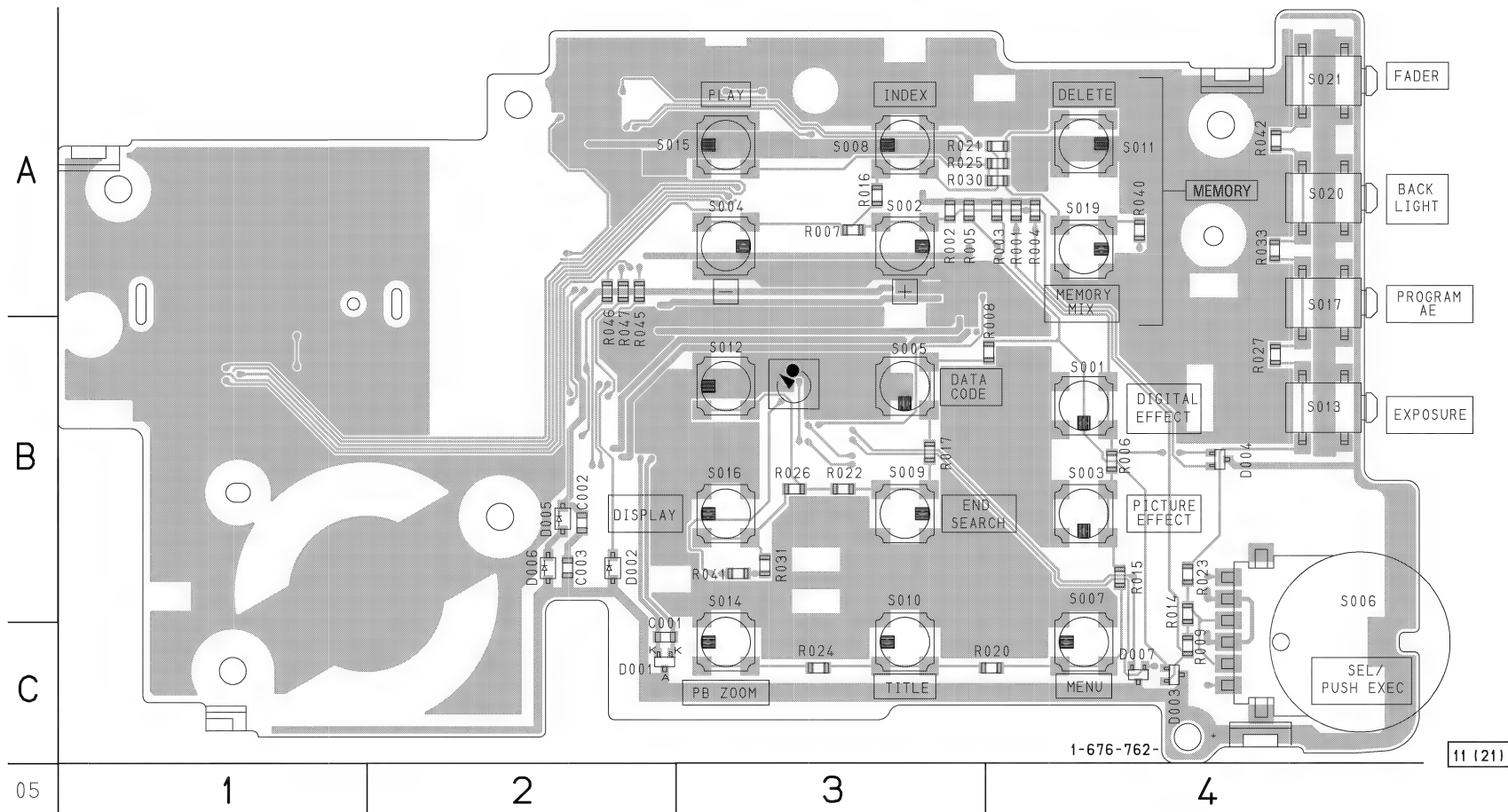
– DCR-TRV420E/TRV520/TRV520E/TRV520P/TRV525/TRV620E –

• **For Printed Wiring Board.**

- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-126 for printed parts location.
- Chip transistor



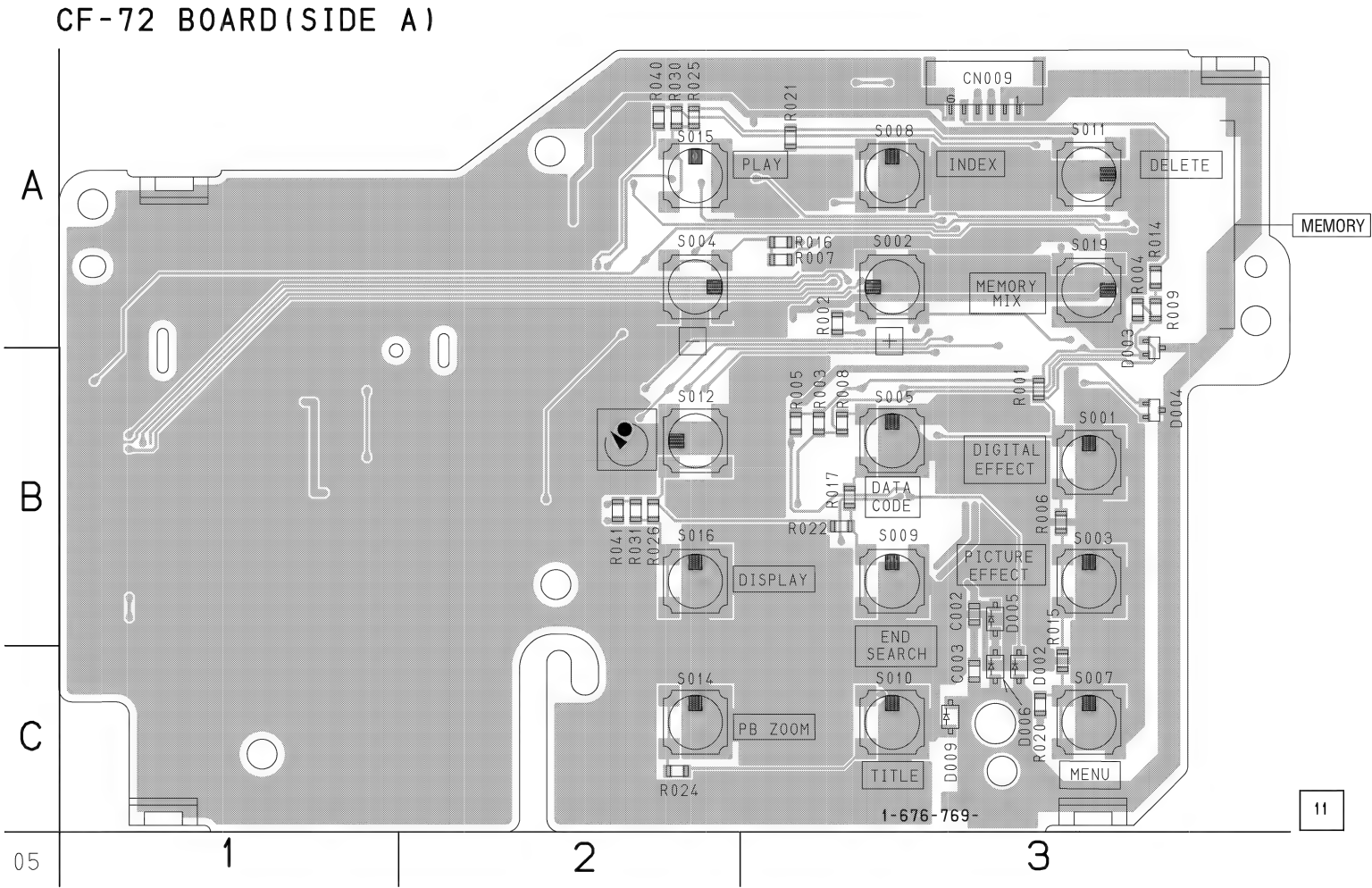
CF-70 BOARD (SIDE A)



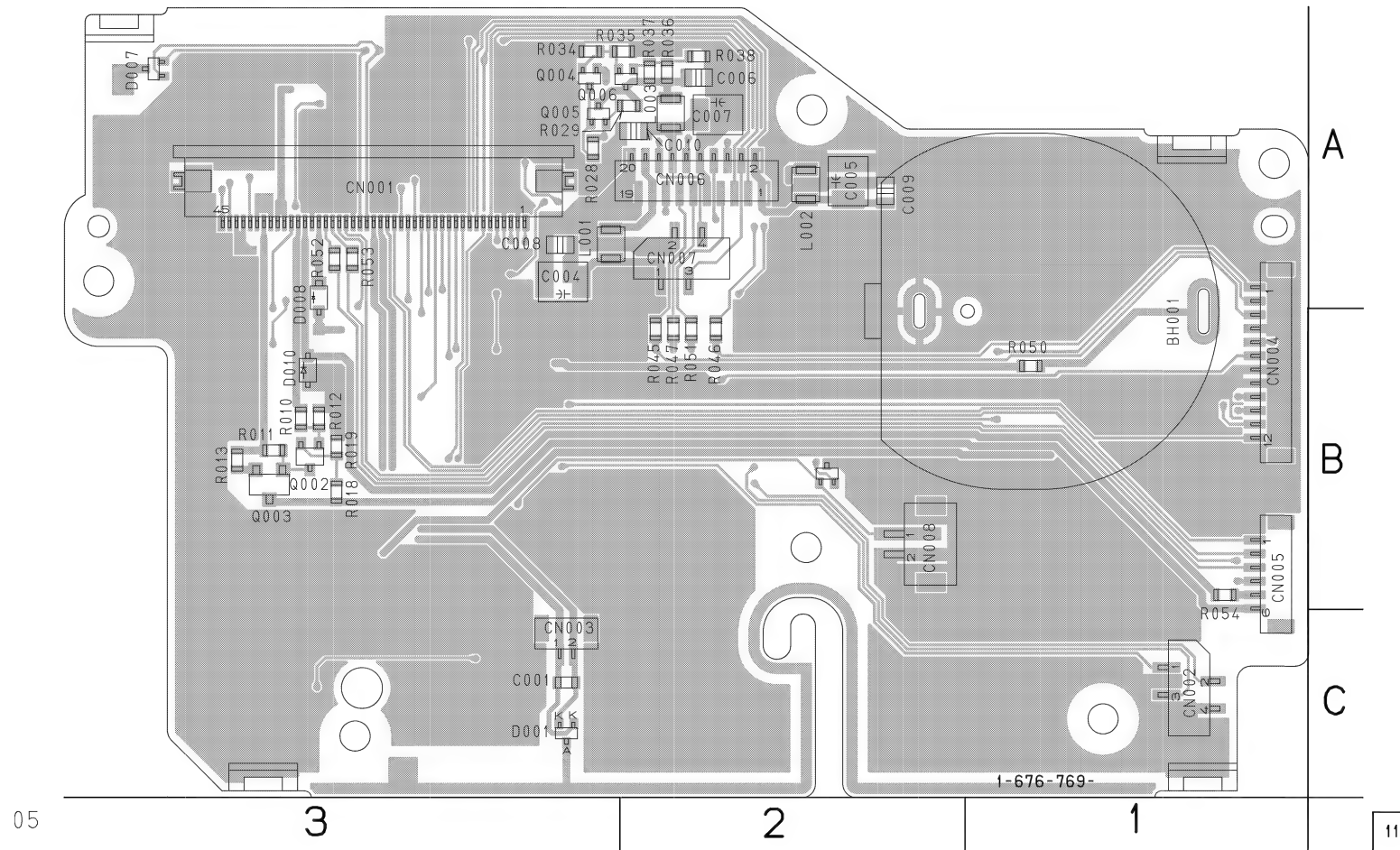
CF-72 (USER CONTROL) PRINTED WIRING BOARD

– Ref. No.: CF-72 board; 40,000 series –
– DCR-TRV720/TRV720E –

- For Printed Wiring Board.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-127 for printed parts location.
- Chip transistor

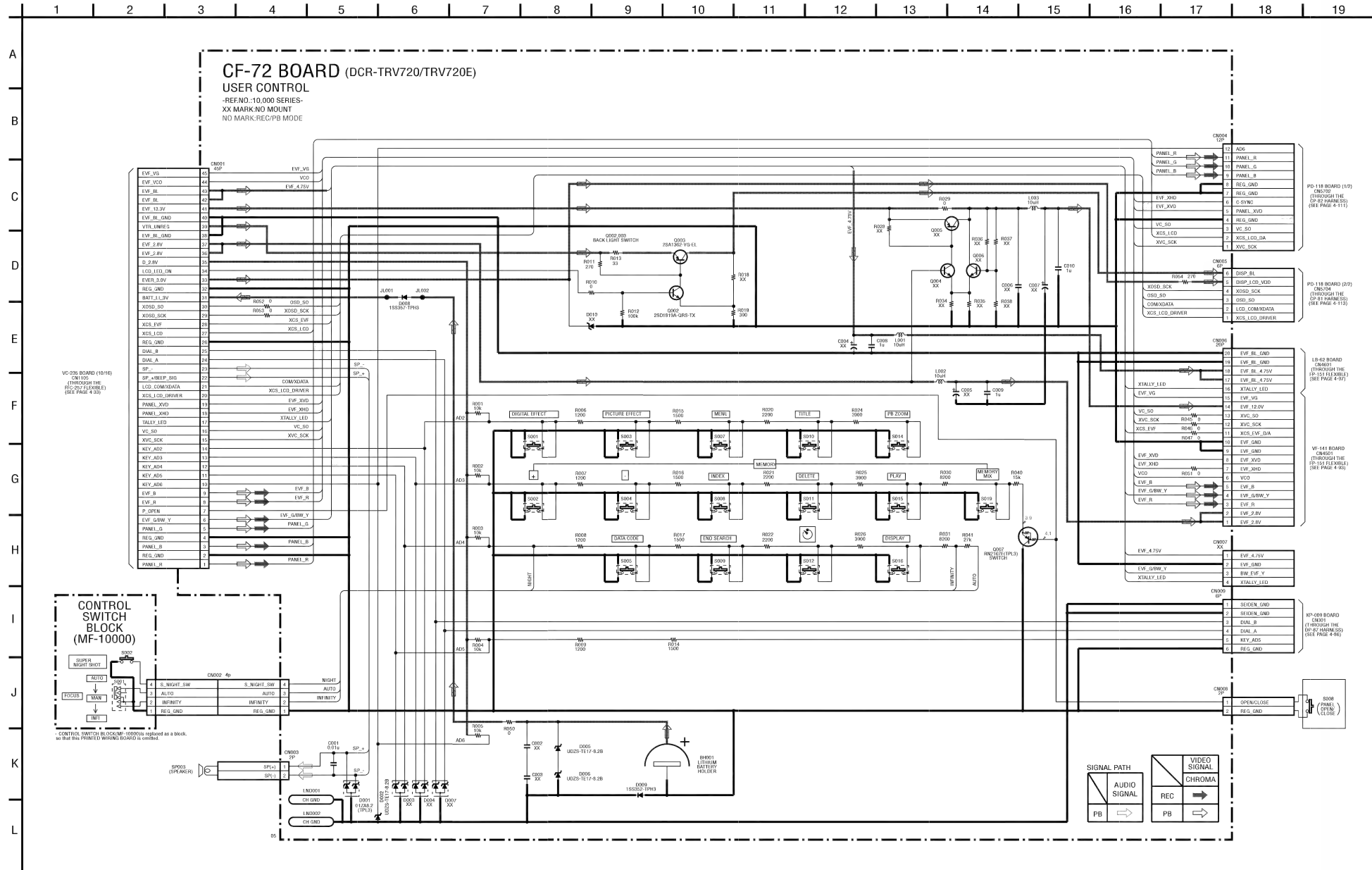


CF-72 BOARD(SIDE B)



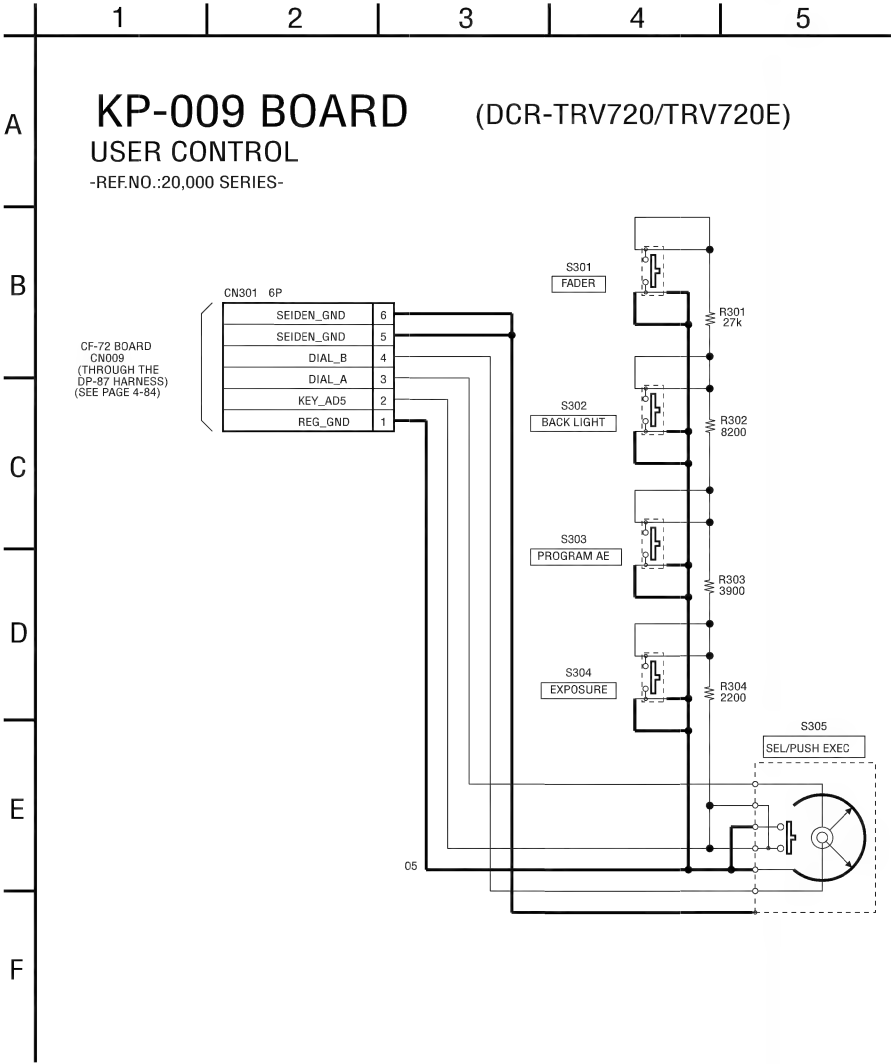
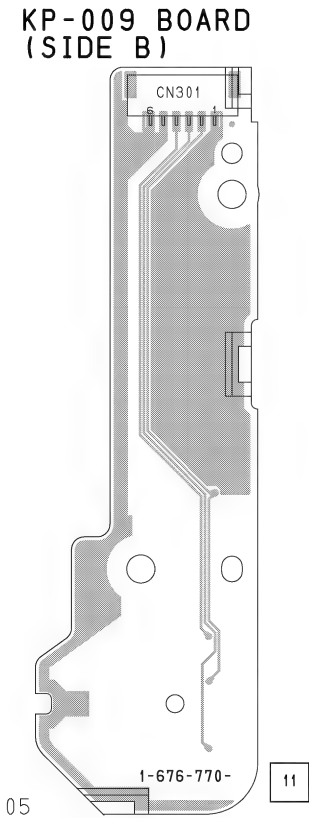
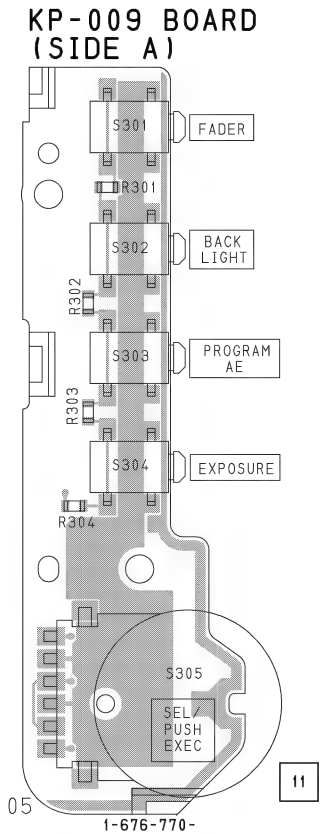
DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E

MF-10000 (CONTROL SWITCH BLOCK), CF-72 (USER CONTROL) SCHEMATIC DIAGRAM • See page 4-79 for CF-72 printed wiring board.

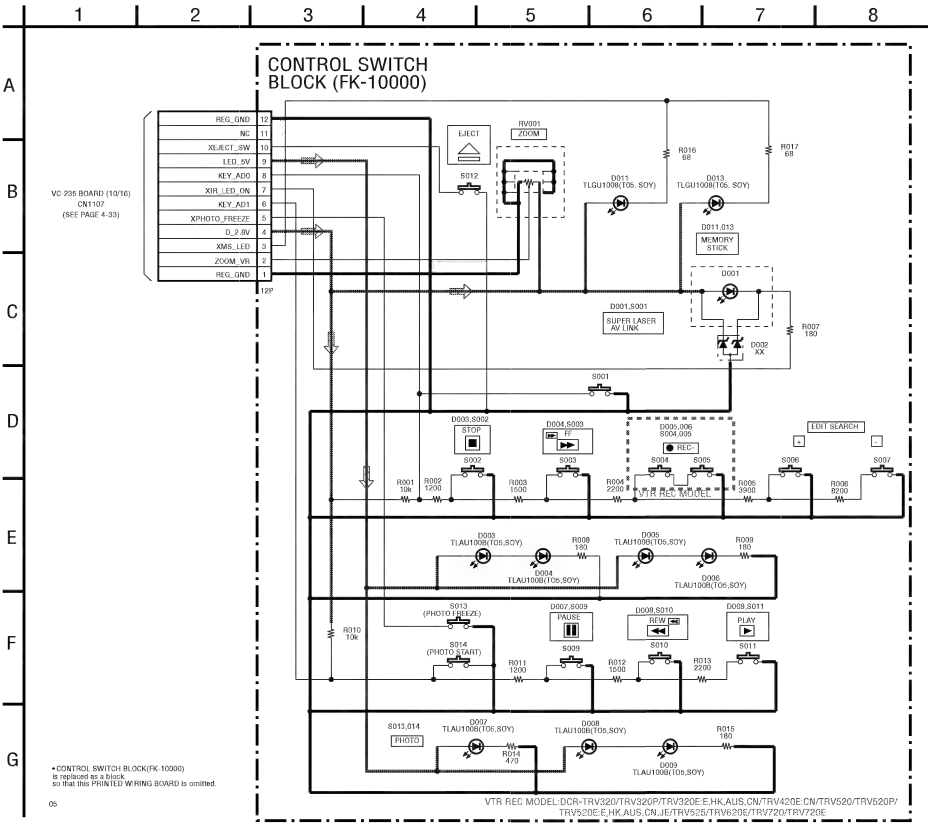


KP-009 (USER CONTROL) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

- For Printed Wiring Board.
- There are few cases that the part isn't mounted in this model is printed on this diagram.



FK-10000 (CONTROL SWITCH BLOCK) SCHEMATIC DIAGRAM



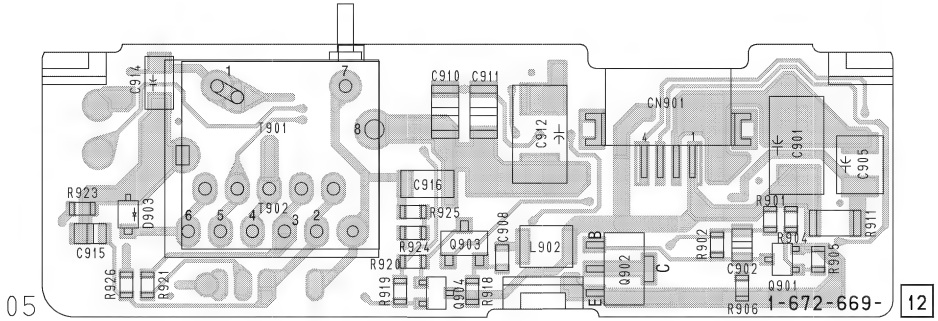
VF-129 (B/W EVF) PRINTED WIRING BOARD

– Ref. No.: VF-129 board; 20,000 series –

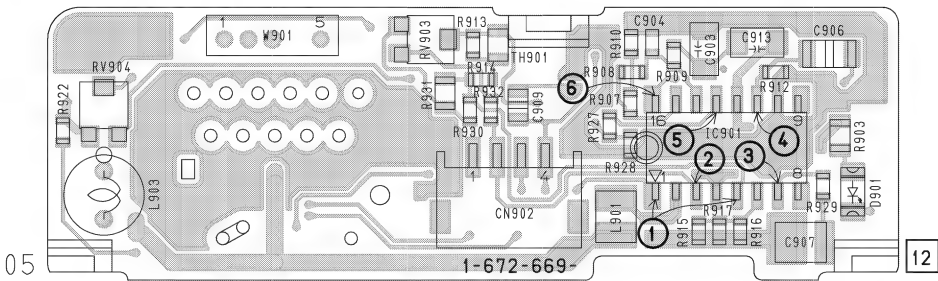
- For Printed Wiring Board.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



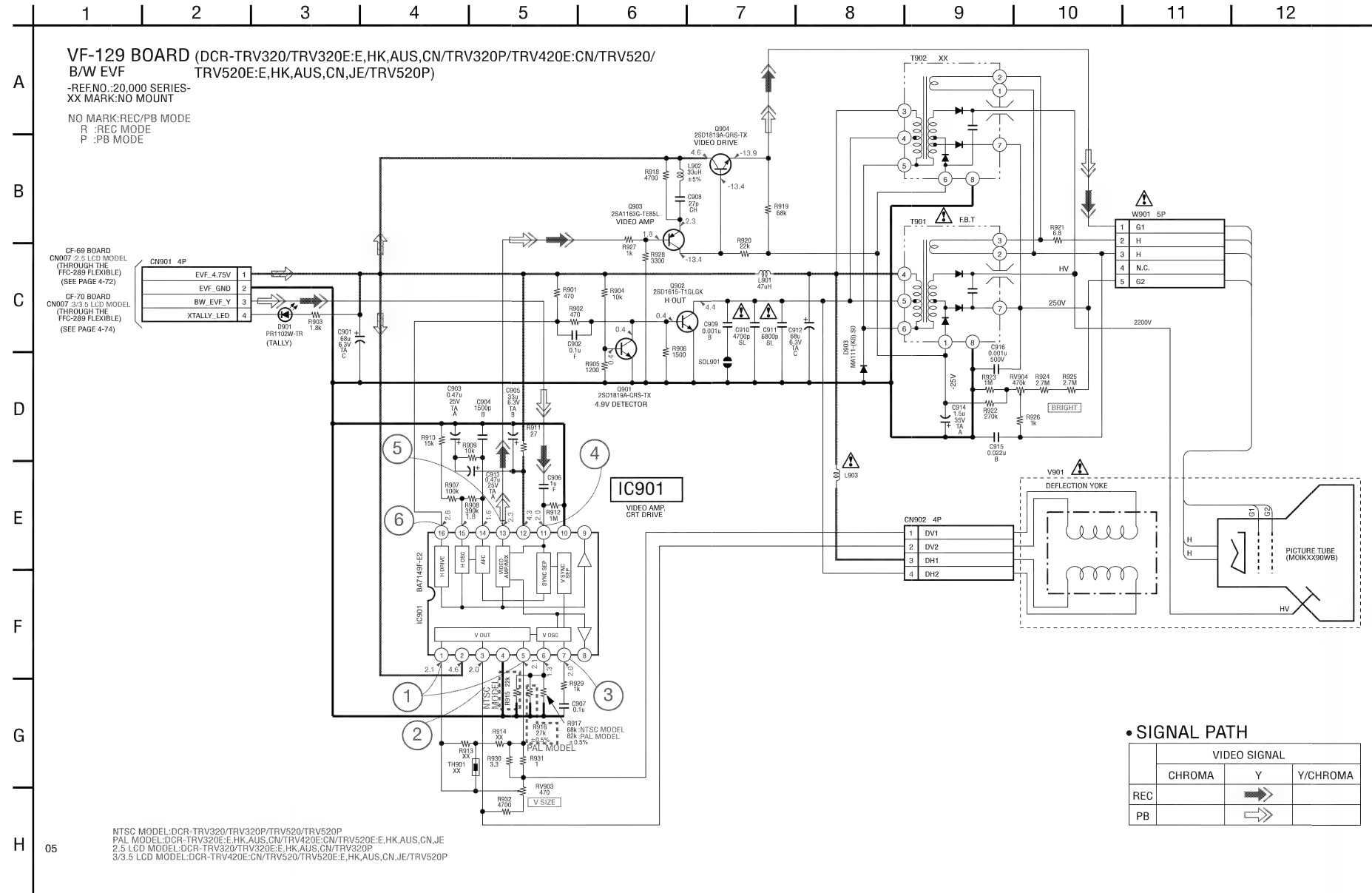
VF-129 BOARD (SIDE A)



VF-129 BOARD (SIDE B)



VF-129 (B/W EVF) SCHEMATIC DIAGRAM • See page 4-122 for waveforms.



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

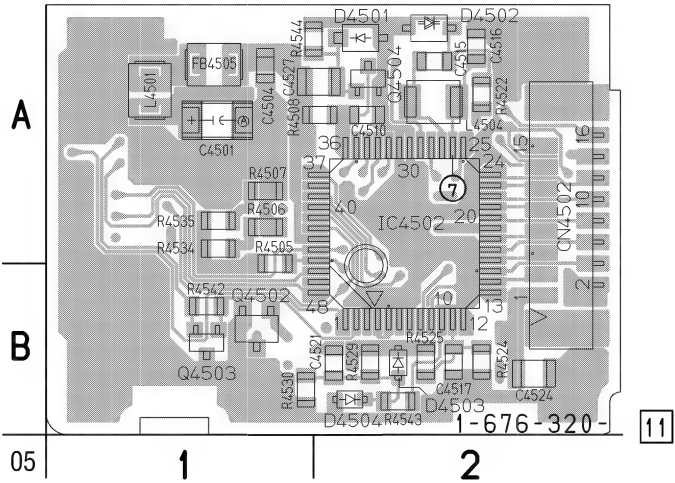
VF-141 (RGB DRIVER, TIMING GENERATOR) PRINTED WIRING BOARD

– Ref. No.: VF-141 board; 20,000 series –

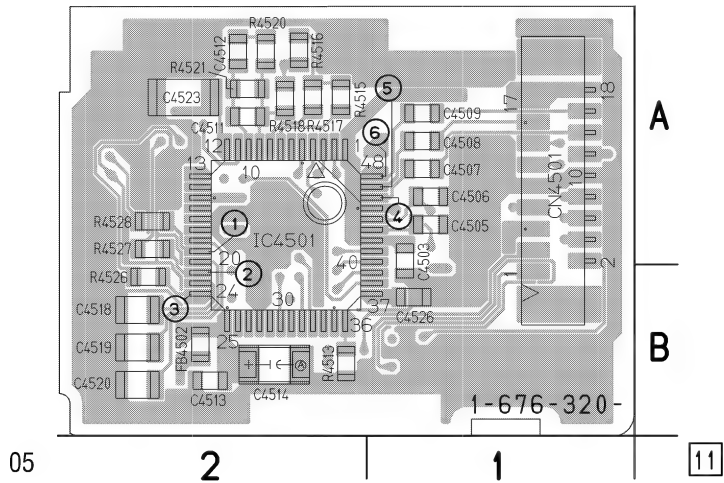
- For Printed Wiring Board.
- VF-141 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-127 for printed parts location.
- Chip transistor

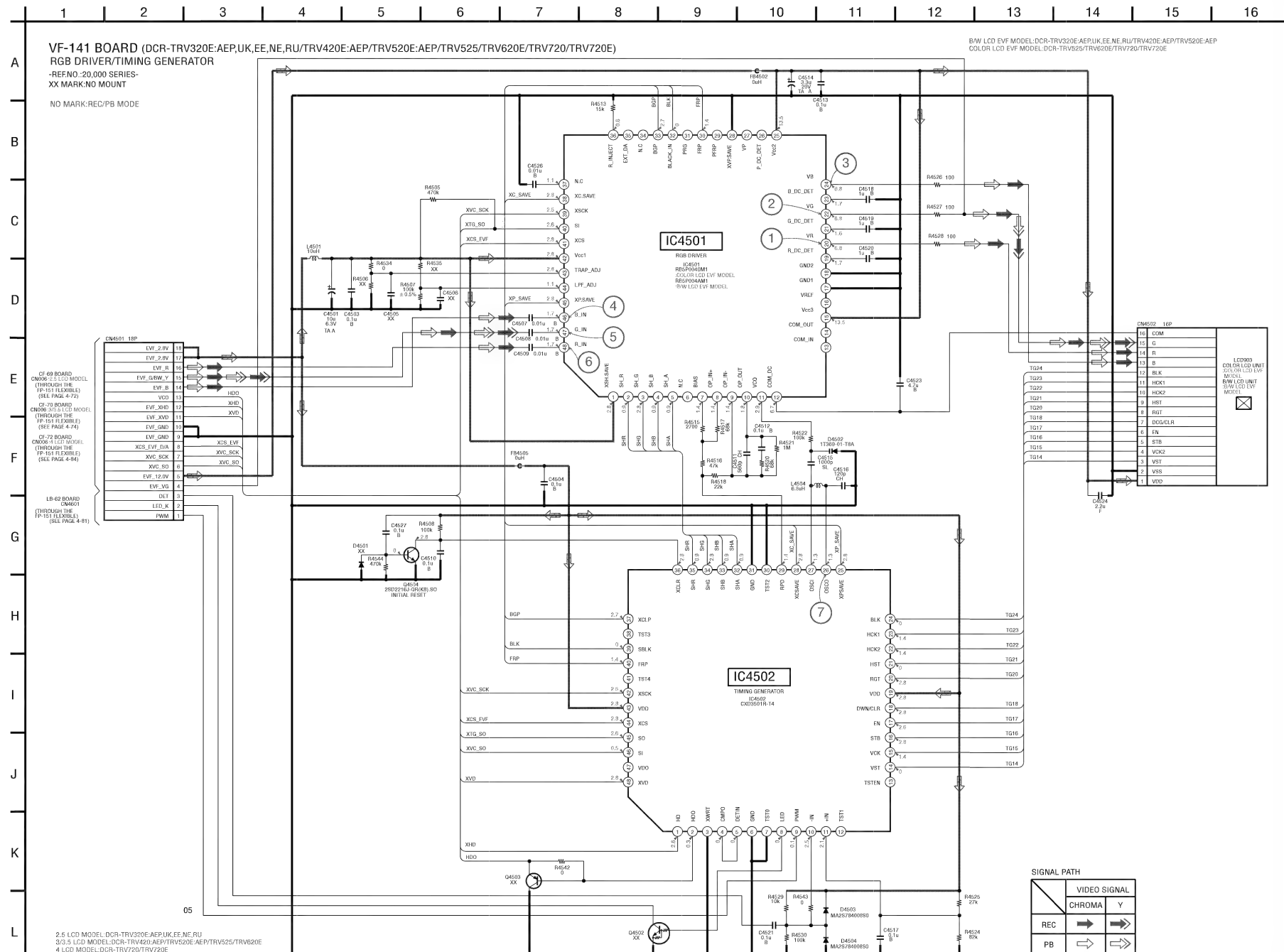


VF-141 BOARD
(SIDE A)



VF-141 BOARD
(SIDE B)

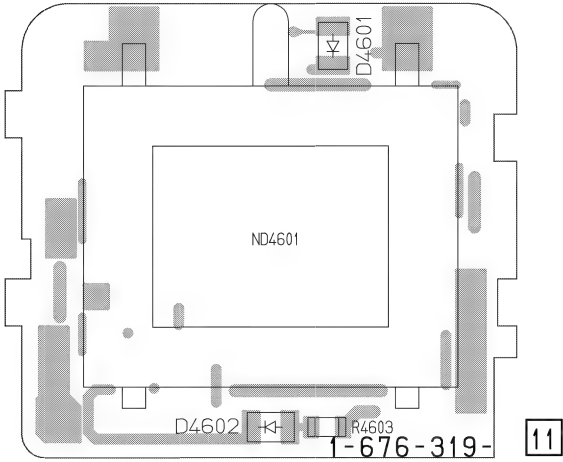




LB-62 (BACK LIGHT) PRINTED WIRING BOARD
– Ref. No.: LB-62 board; 20,000 series –

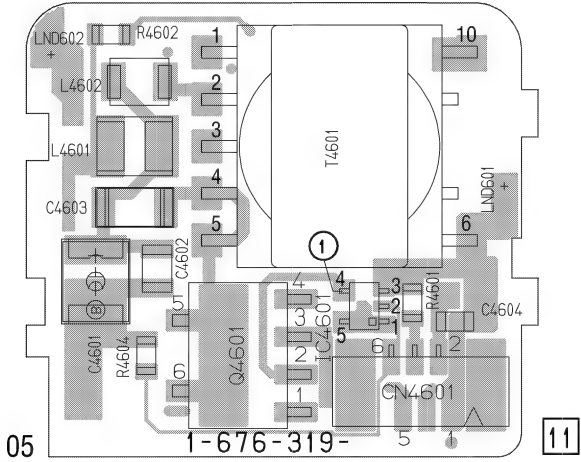
- **For Printed Wiring Board.**
- LB-62 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.

LB-62 BOARD
(SIDE A)



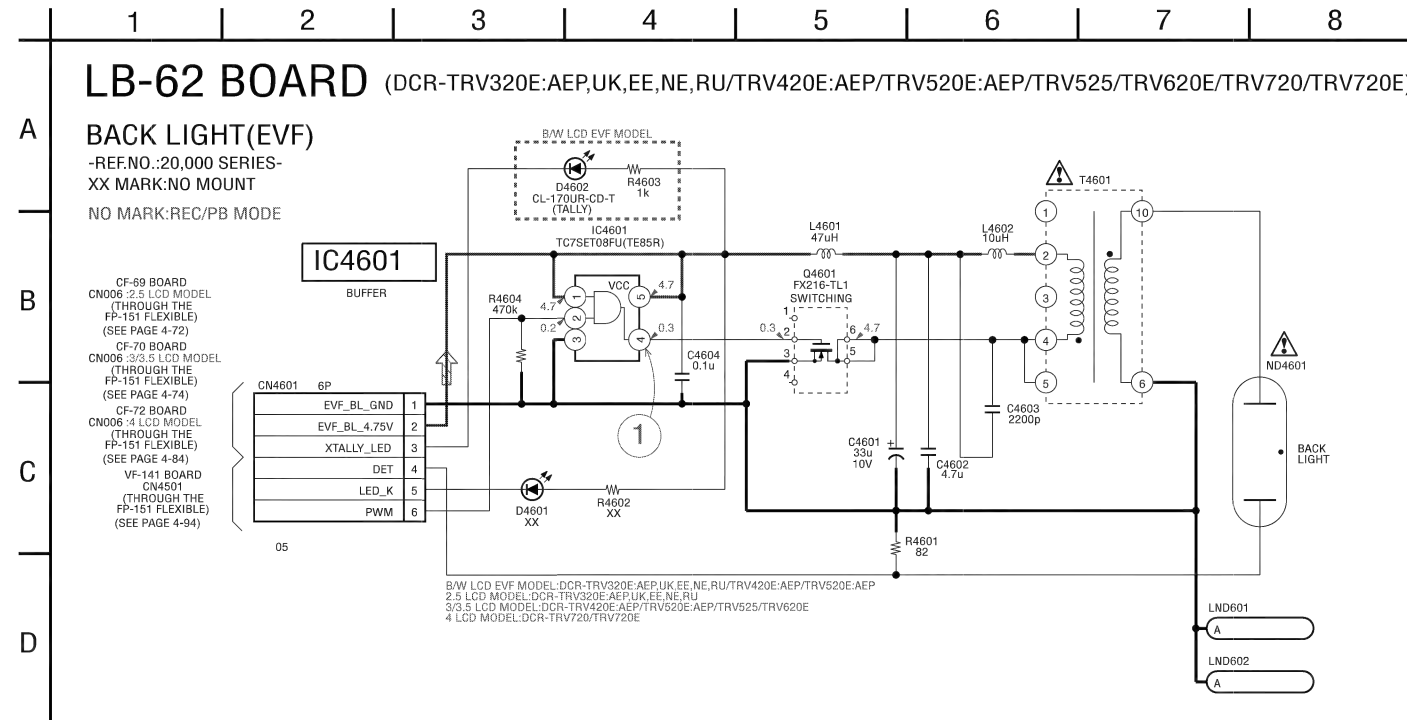
05

LB-62 BOARD
(SIDE B)



05

LB-62 (BACK LIGHT) SCHEMATIC DIAGRAM • See page 4-123 for waveform.



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

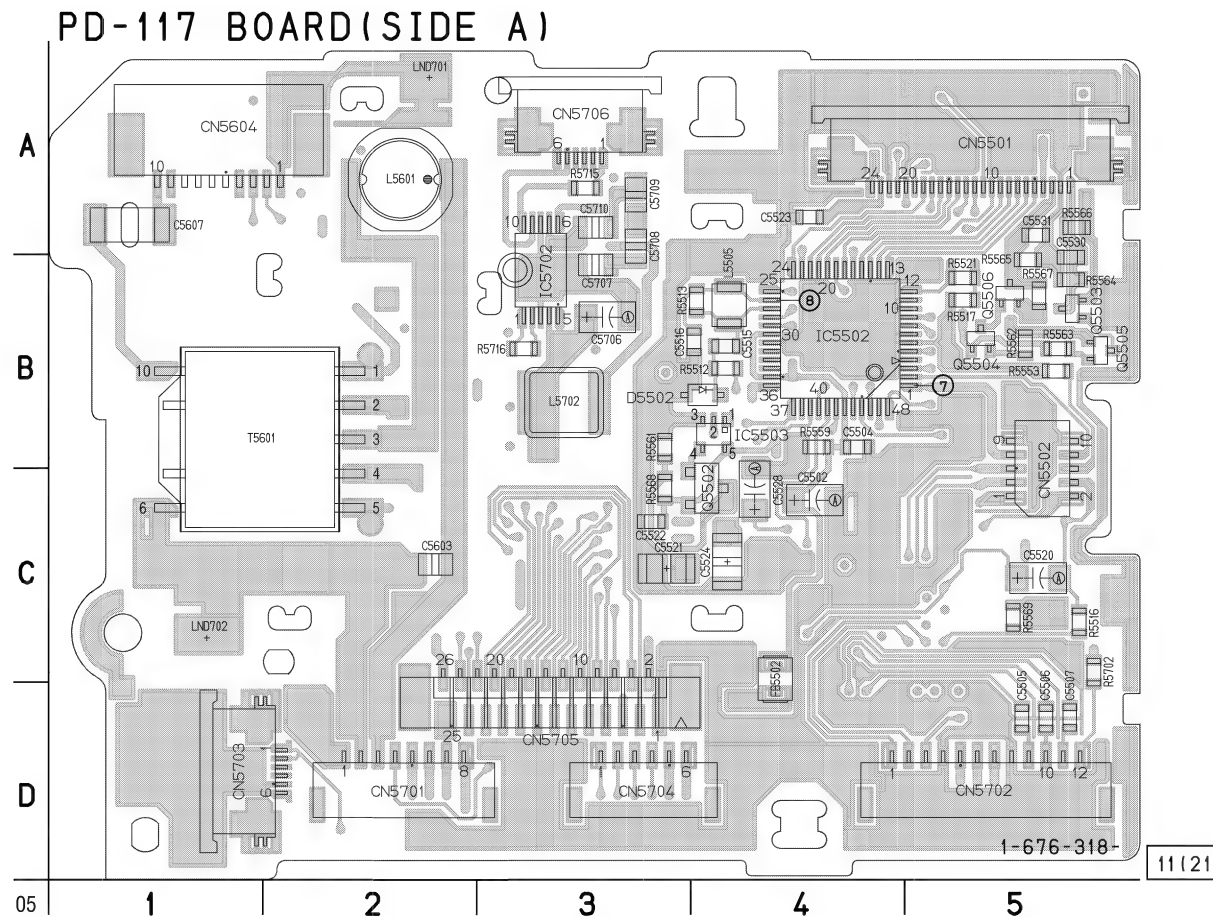
**DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525
TRV620E/TRV720/TRV720E**

PD-117 (RGB/CG LCD DRIVER, TIMING GENERATOR, BACK LIGHT) PRINTED WIRING BOARD

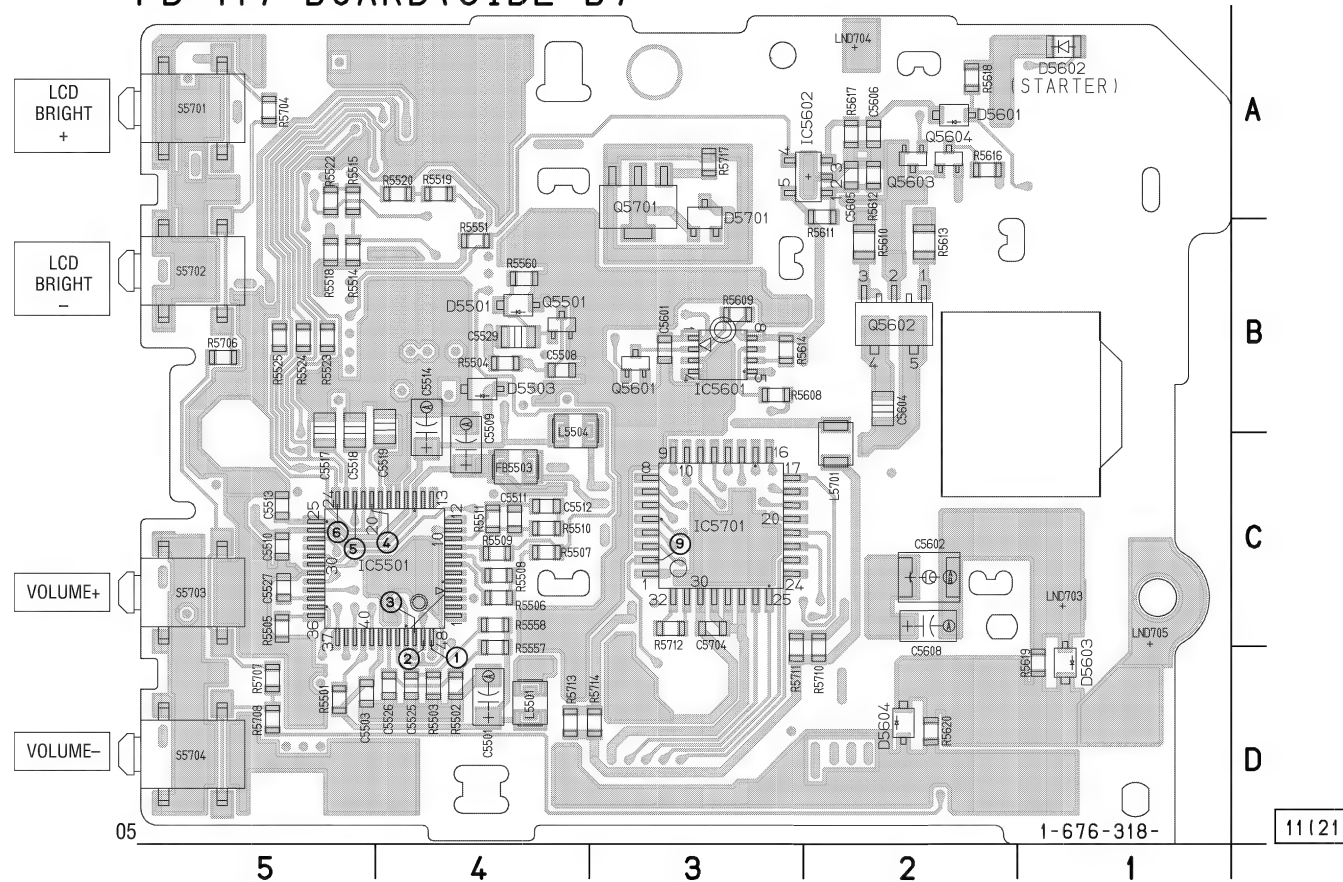
– Ref. No.: PD-117 board; 20,000 series –

• **For Printed Wiring Board.**

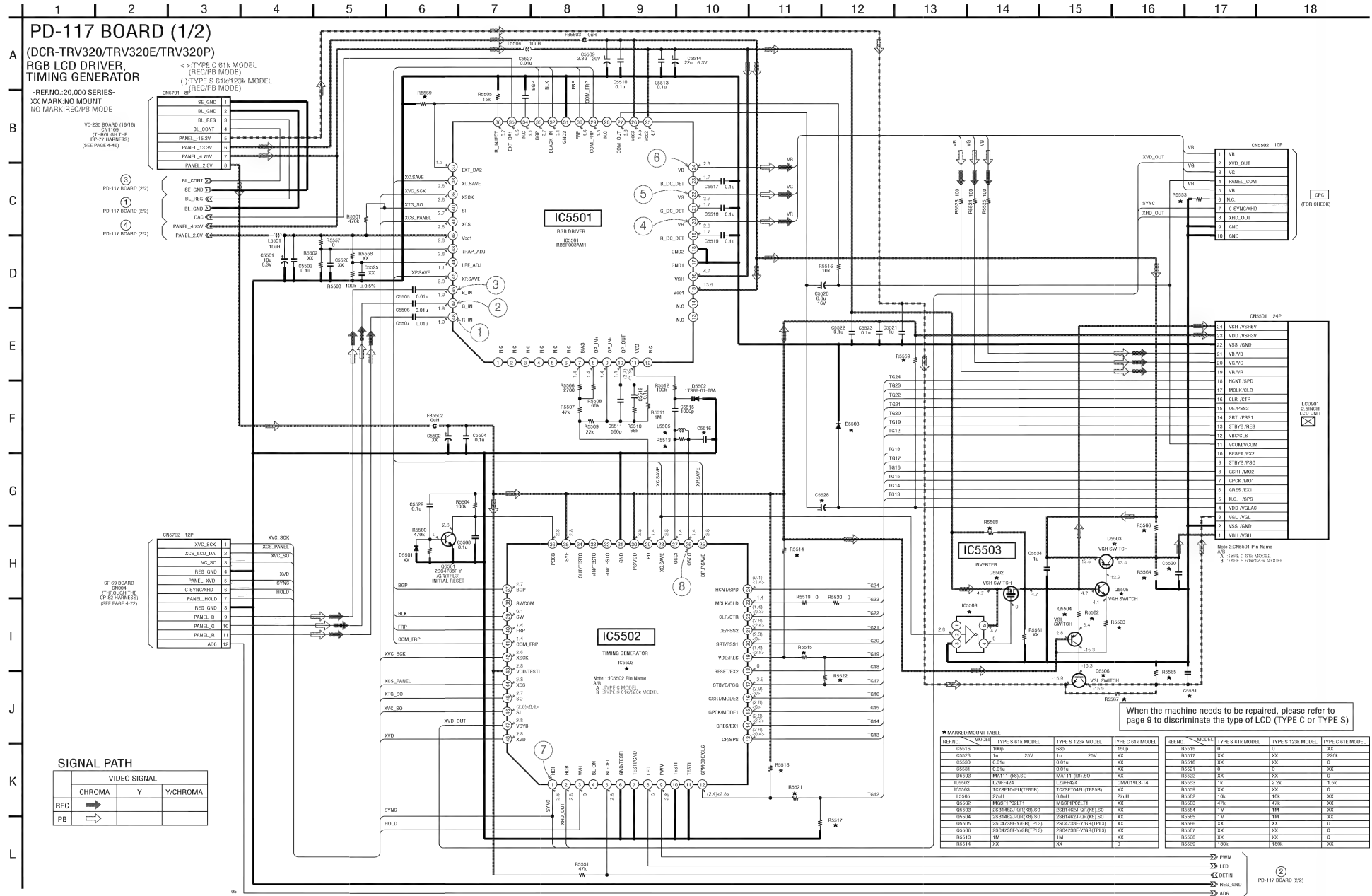
- PD-117 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-127 for printed parts location.
- Chip transistor



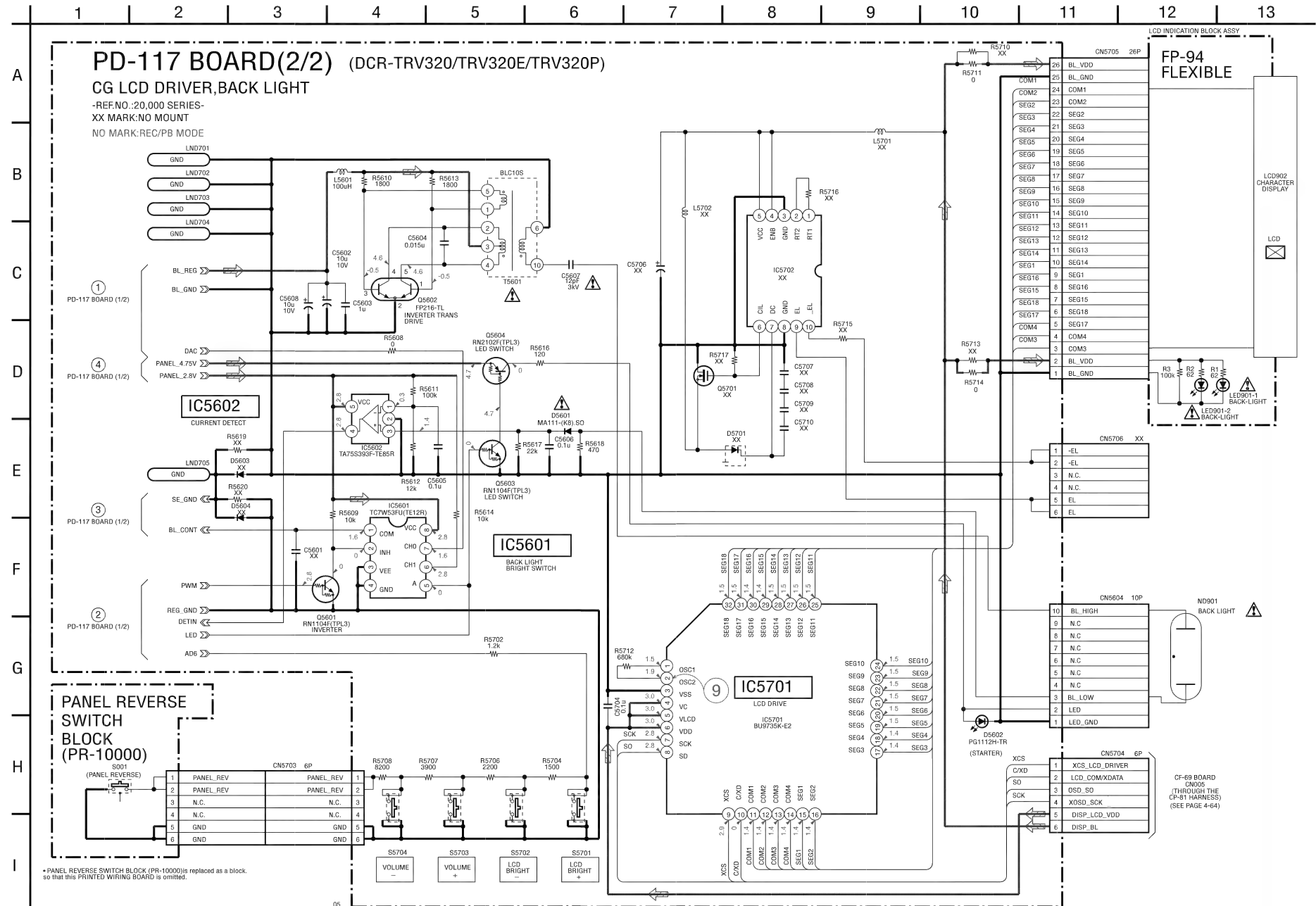
PD-117 BOARD (SIDE B)



PD-117 (RGB LCD DRIVER, TIMING GENERATOR) SCHEMATIC DIAGRAM • See page 4-99 for PD-117 printed wiring board. • See page 4-123 for waveforms.



PR-10000 (PANEL REVERSE SWITCH BLOCK), PD-117 (CG LCD DRIVER, BACK LIGHT) SCHEMATIC DIAGRAM • See page 4-99 for PD-117 printed wiring board. • See page 4-123 for waveforms.



The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-118 (RGB/CG LCD DRIVER, TIMING GENERATOR, BACK LIGHT) PRINTED WIRING BOARD

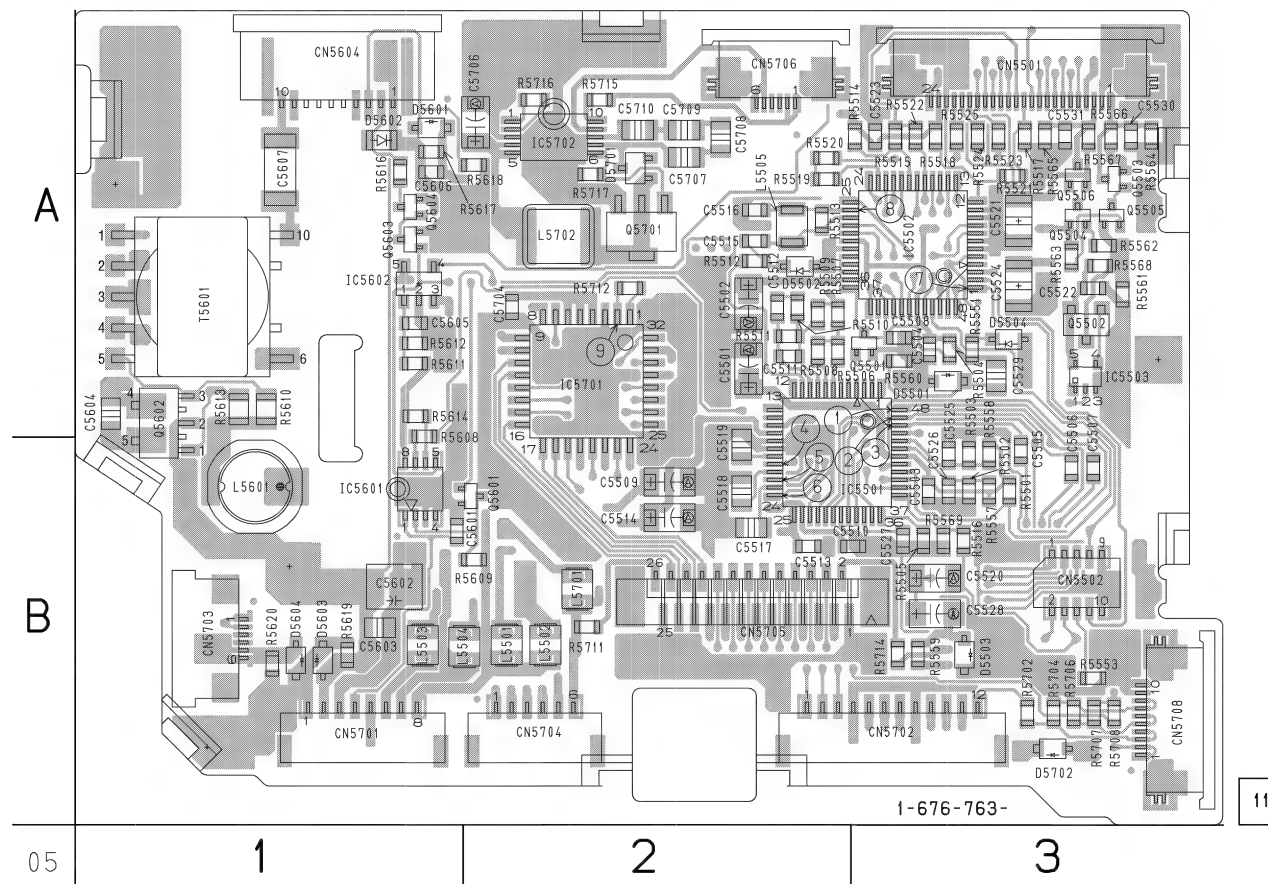
– Ref. No.: PD-118 board; 20,000 series –

• For Printed Wiring Board.

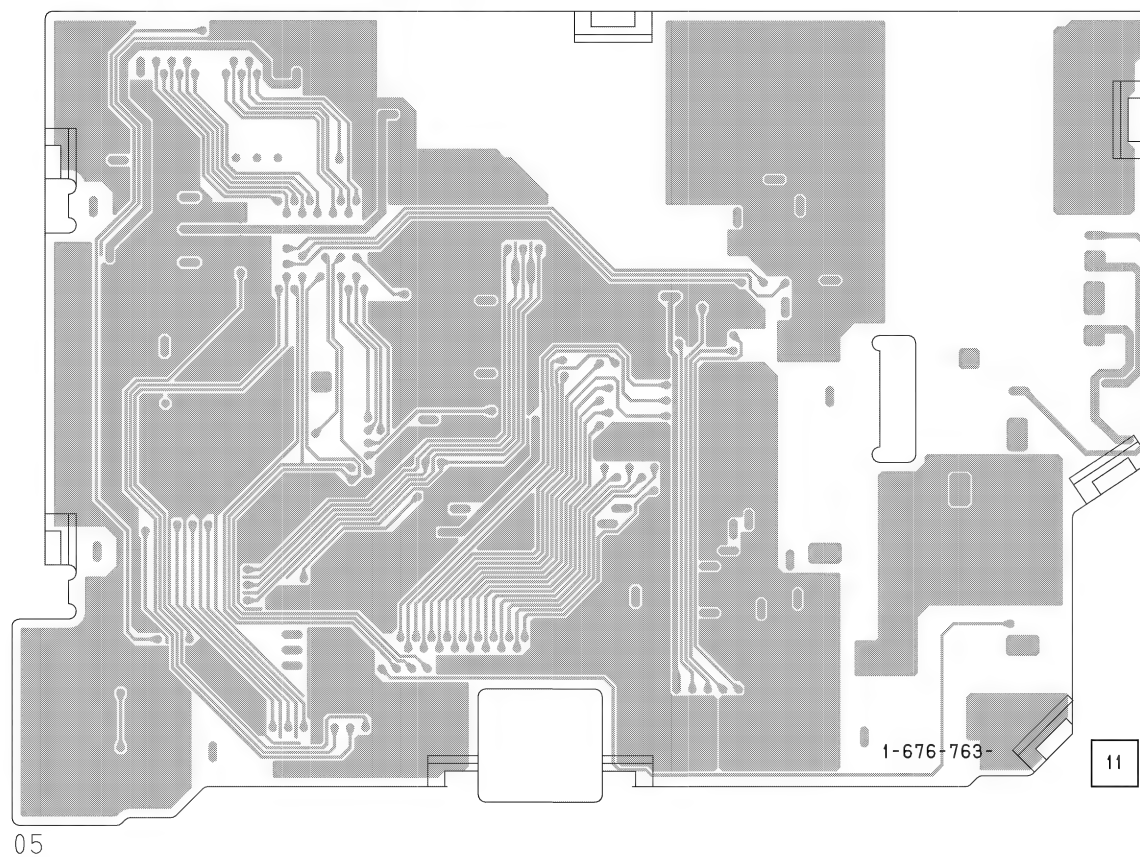
- PD-118 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-128 for printed parts location.
- PD-118 board (SIDE B) is not mounted.
- Chip transistor



PD-118 BOARD (SIDE A)

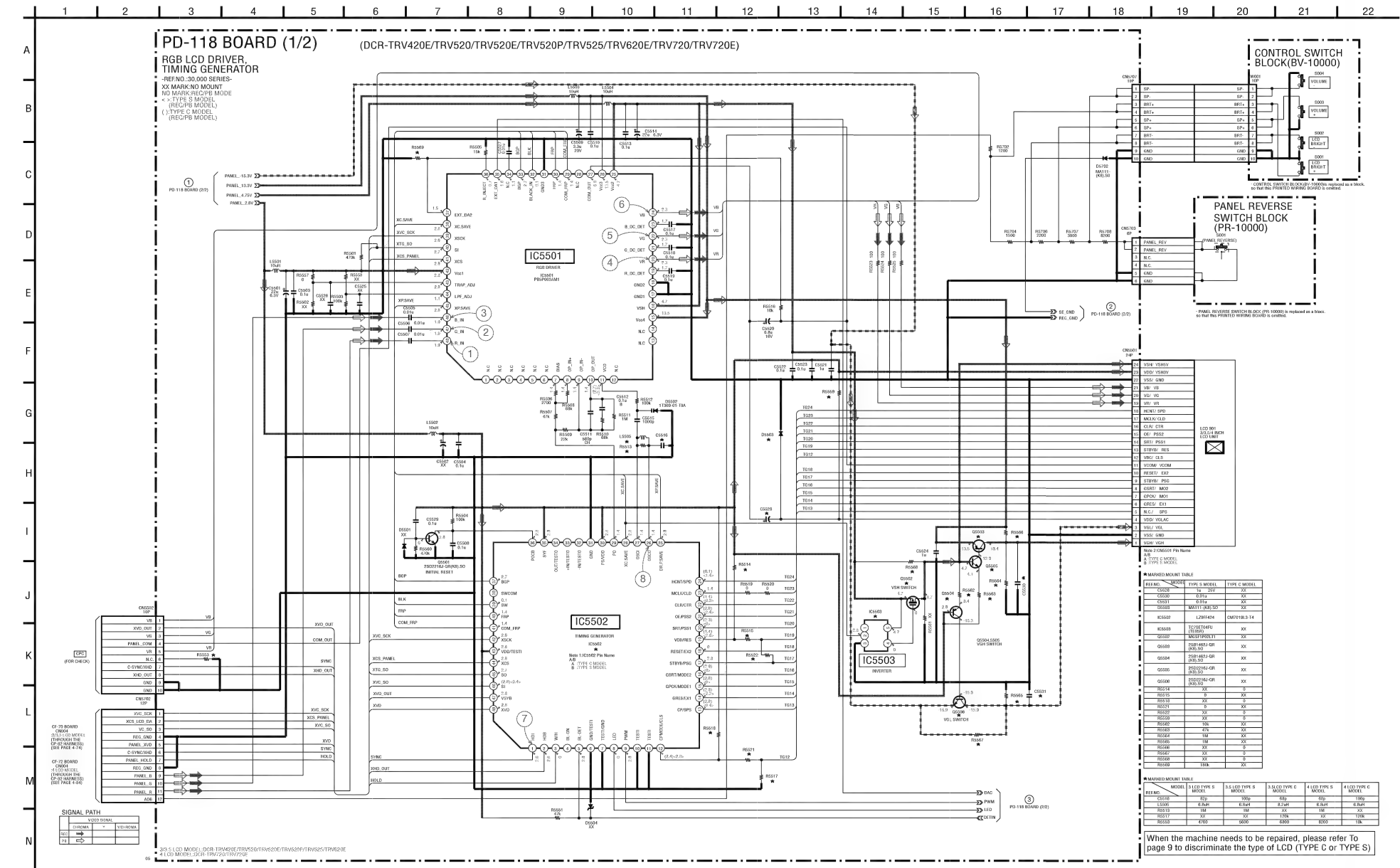


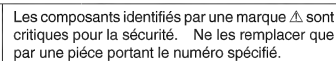
PD-118 BOARD (SIDE B)



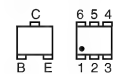
DCR-TRV320/TRV320E/TRV320P/TRV420E/TRV520/TRV520E/TRV520P/TRV525 TRV620E/TRV720/TRV720E

PD-118 (RGB LCD DRIVER, TIMING GENERATOR), BV-10000 (CONTROL SWITCH BLOCK), PR-10000 (PANEL REVERSE SWITCH BLOCK) SCHEMATIC DIAGRAM
• See page 4-107 for PD-118 printed wiring board. • See page 4-123 for waveforms.





- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor

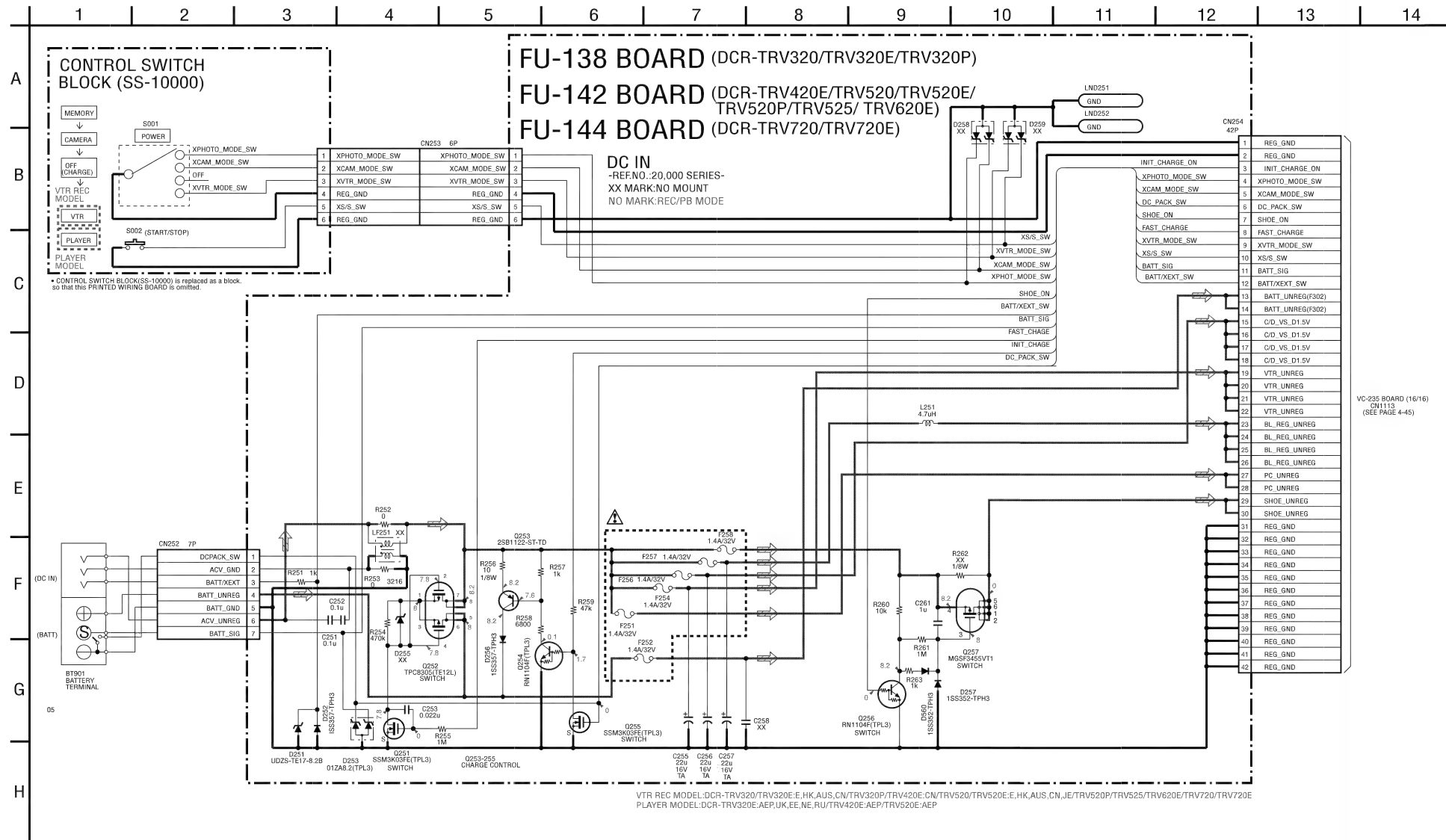


| | |
|-------------------|---------|
| FU-138:1-676-775- | 12 (22) |
| FU-142:1-676-761- | 11 (21) |
| FU-144:1-676-768- | 11 |


05

| | |
|-------------------|---------|
| FU-138:1-676-775- | 12 (22) |
| FU-142:1-676-761- | 11 (21) |
| FU-144:1-676-768- | 11 |

SS-10000 (CONTROL SWITCH BLOCK), FU-138/142/144 (DC IN) SCHEMATIC DIAGRAM

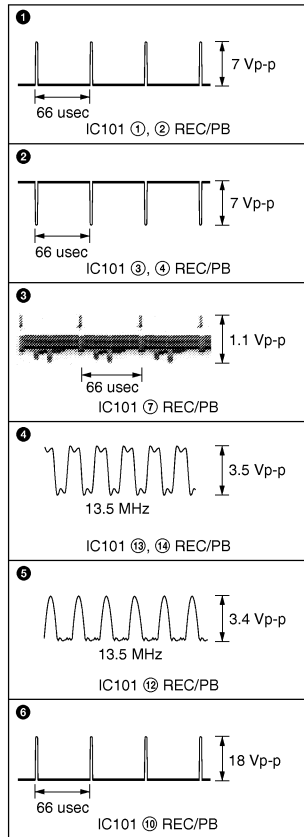


The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

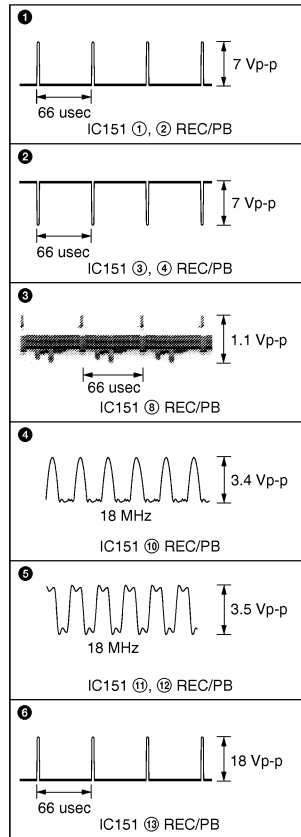
Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

4-3. WAVEFORMS

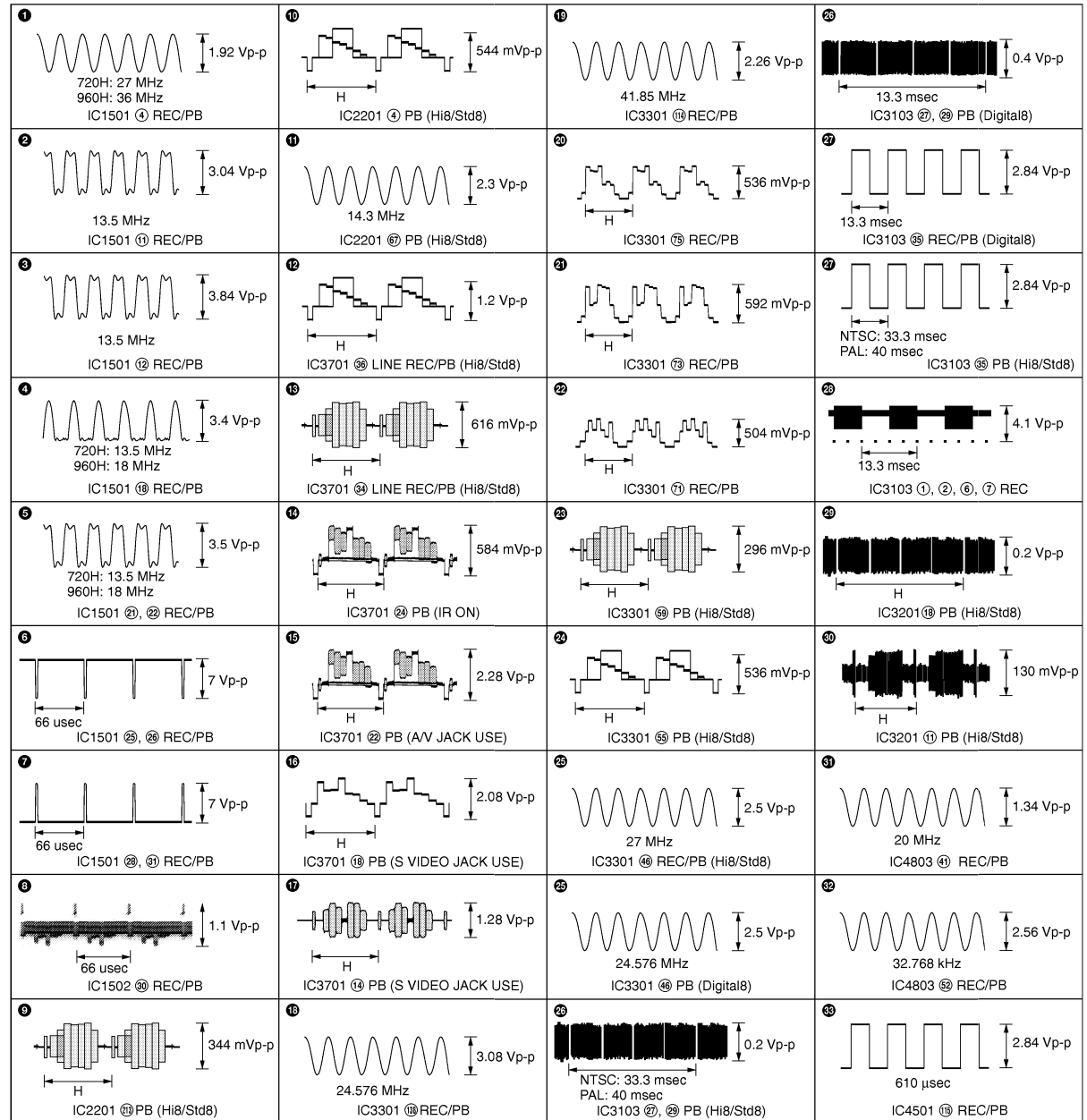
CD-242/266/270 BOARD









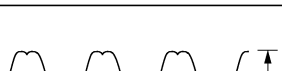

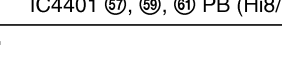
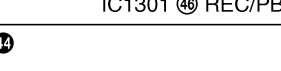
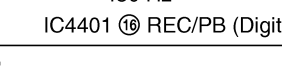
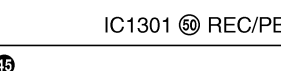
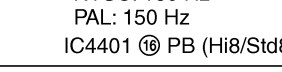
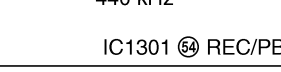
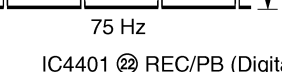
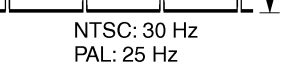
CD-244/267/271 BOARD




VC-235 BOARD

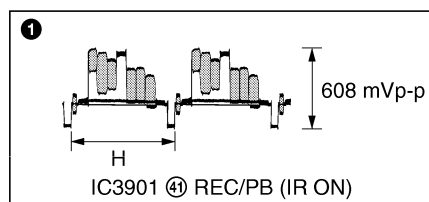


PC-77 BOARD

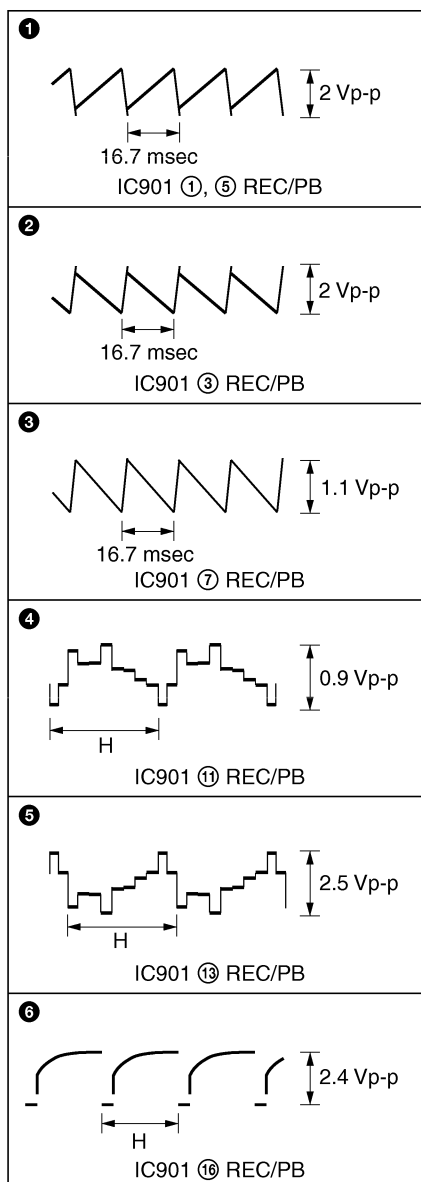
| | |
|---|---|
| <p>34</p>  <p>20 MHz IC4902 ① REC/PB</p> | <p>40</p>  <p>440 kHz IC1301 ② REC/PB</p> |
| <p>35</p>  <p>0.87 msec IC4902 ⑩ PB (Hi8/Std8)</p> | <p>41</p>  <p>440 kHz IC1301 ④ REC/PB</p> |
| <p>36</p>  <p>450 Hz IC4401 ⑤⑦, ⑤⑨, ⑥① REC/PB (Digital8)</p> | <p>42</p>  <p>440 kHz IC1301 ④⑤ REC/PB</p> |
| <p>36</p>  <p>NTSC: 180 Hz PAL: 150 Hz IC4401 ⑤⑦, ⑤⑨, ⑥① PB (Hi8/Std8)</p> | <p>43</p>  <p>440 kHz IC1301 ④⑥ REC/PB</p> |
| <p>37</p>  <p>450 Hz IC4401 ⑩ REC/PB (Digital8)</p> | <p>44</p>  <p>440 kHz IC1301 ⑤⑩ REC/PB</p> |
| <p>37</p>  <p>NTSC: 180 Hz PAL: 150 Hz IC4401 ⑩ PB (Hi8/Std8)</p> | <p>45</p>  <p>440 kHz IC1301 ⑤④ REC/PB</p> |
| <p>38</p>  <p>75 Hz IC4401 ② REC/PB (Digital8)</p> | <p>46</p>  <p>440 kHz IC1301 ⑥⑦ REC/PB</p> |
| <p>38</p>  <p>NTSC: 30 Hz PAL: 25 Hz IC4401 ② PB (Hi8/Std8)</p> | |
| <p>39</p>  <p>12.7 usec IC4401 ②⑨ REC/PB</p> | |

| |
|--|
| <p>1</p>  <p>25.8048 MHz IC105 ⑩⑩ MEMORY REC/PB</p> |
|--|

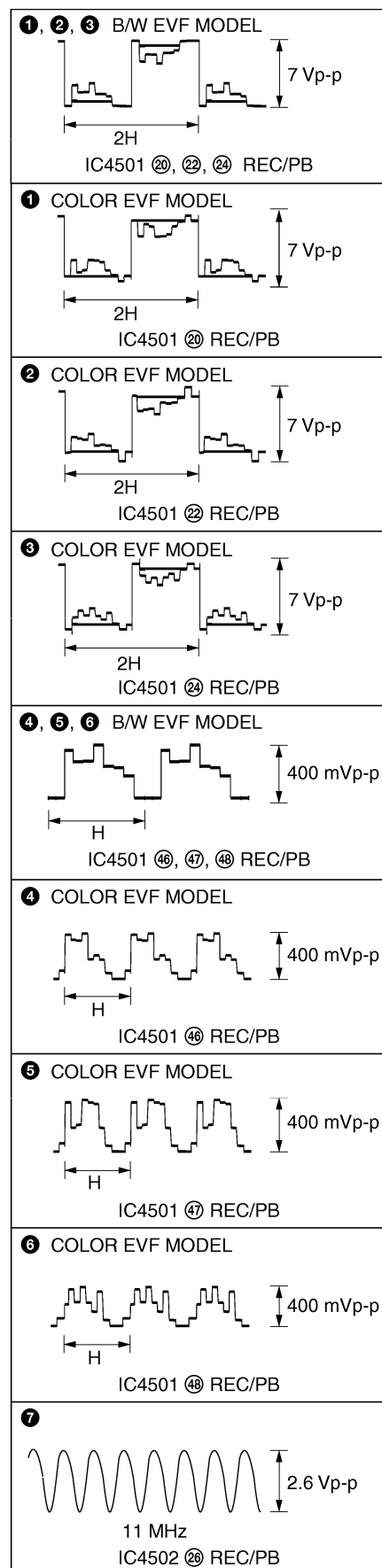
MI-37 BOARD

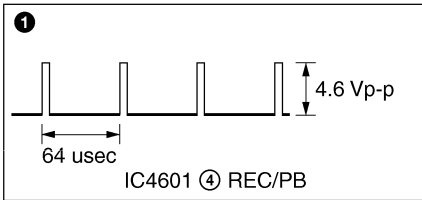
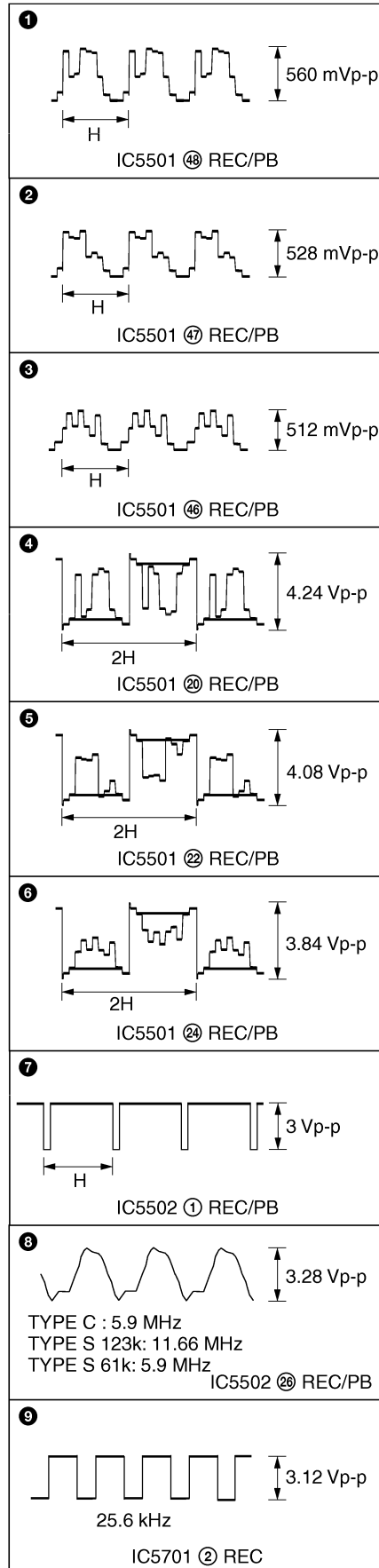
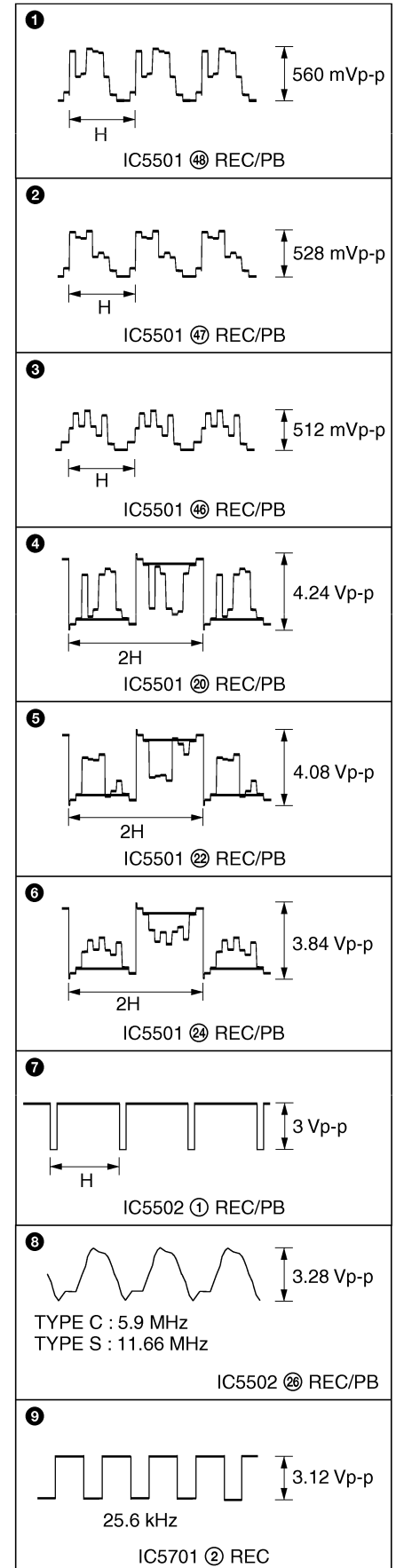


VF-129 BOARD



VF-141 BOARD



LB-62 BOARD**PD-117 BOARD****PD-118 BOARD**

4-4. PARTS LOCATION

* : C1504 is mounted on the board with suffix number **-13 (23, 33)**

VC-235 BOARD
(SIDE A)

| | | | | | |
|-------|-----|--------|-----|--------|-----|
| C1320 | B-6 | C3207 | F-3 | FB1504 | C-5 |
| C1322 | B-6 | C3208 | F-2 | FB2202 | C-4 |
| C1333 | C-8 | C3210 | F-3 | FB2203 | D-3 |
| C1335 | C-8 | C3211 | F-3 | FB2204 | C-3 |
| C1336 | C-8 | C3212 | F-3 | FB2205 | B-3 |
| C1338 | A-8 | C3213 | F-3 | FB2291 | F-6 |
| C1339 | C-8 | C3214 | F-3 | FB3701 | F-1 |
| C1340 | C-7 | C3215 | F-3 | FB4801 | B-5 |
| C1341 | C-8 | C3216 | F-3 | | |
| C1342 | B-9 | C3217 | F-3 | IC1302 | B-6 |
| C1343 | C-7 | C3218 | F-3 | IC1303 | F-4 |
| C1345 | C-8 | C3320 | C-6 | IC1502 | B-4 |
| C1346 | C-9 | C3327 | C-6 | IC1552 | A-5 |
| C1347 | C-7 | C3701 | F-1 | IC1553 | A-4 |
| C1348 | B-9 | C3704 | F-2 | IC2201 | D-5 |
| C1350 | C-7 | C3705 | F-2 | IC2202 | E-4 |
| C1352 | B-6 | C3706 | F-2 | IC2291 | F-6 |
| C1353 | A-6 | C3707 | F-2 | IC3103 | F-5 |
| C1354 | C-5 | C3708 | F-2 | IC3201 | F-3 |
| C1355 | A-6 | C3709 | F-2 | IC3202 | F-3 |
| C1356 | C-8 | C3710 | F-2 | IC3701 | E-2 |
| C1357 | F-4 | C3711 | F-2 | IC4401 | F-8 |
| C1508 | B-5 | C3712 | F-2 | | |
| C1513 | B-4 | C3713 | F-2 | L1301 | B-8 |
| C1514 | B-4 | C3714 | F-2 | L1302 | B-8 |
| C1515 | B-5 | C3715 | F-3 | L1303 | B-7 |
| C1516 | B-4 | C3716 | F-3 | L1304 | A-8 |
| C1517 | B-4 | C3717 | F-2 | L1305 | A-8 |
| C1518 | B-4 | C3718 | F-2 | L1306 | C-7 |
| C1519 | B-4 | C3719 | E-2 | L1307 | C-7 |
| C1520 | B-4 | C3723 | E-2 | L1308 | C-8 |
| C1521 | B-4 | C3724 | E-2 | L1309 | C-8 |
| C1522 | B-4 | C3728 | E-2 | L1311 | B-6 |
| C1523 | B-4 | C3729 | E-2 | L1312 | C-9 |
| C1525 | B-5 | C3730 | E-2 | L1313 | C-8 |
| C1552 | A-5 | C3731 | E-2 | L1314 | C-9 |
| C1554 | A-5 | C3732 | E-3 | L1315 | C-8 |
| C1558 | B-5 | C3733 | E-3 | L1316 | C-8 |
| C1559 | B-5 | C3734 | E-2 | L1317 | A-7 |
| C1560 | A-5 | C3735 | E-2 | L1318 | C-7 |
| C1561 | A-4 | C4401 | G-8 | L1320 | C-9 |
| C1562 | A-5 | C4402 | G-9 | L1321 | B-6 |
| C1564 | A-5 | C4403 | G-7 | L2201 | D-3 |
| C1565 | B-5 | C4404 | G-8 | L2203 | C-3 |
| C1566 | B-5 | C4405 | G-8 | L2204 | F-4 |
| C1568 | B-5 | C4406 | G-8 | L2207 | E-4 |
| C1570 | A-5 | C4407 | G-8 | L2208 | D-3 |
| C1572 | A-5 | C4408 | F-8 | L2291 | E-7 |
| C2201 | F-4 | C4409 | G-6 | L3103 | E-6 |
| C2202 | F-4 | C4410 | G-9 | L3104 | E-5 |
| C2203 | E-3 | C4411 | G-6 | L3105 | F-5 |
| C2204 | E-4 | C4412 | G-6 | L3106 | F-5 |
| C2208 | E-4 | C4413 | F-7 | L3201 | G-2 |
| C2210 | E-3 | C4414 | G-8 | L3305 | C-6 |
| C2211 | E-3 | C4415 | F-8 | L3306 | C-6 |
| C2212 | E-4 | C4416 | F-8 | L3701 | E-3 |
| C2213 | E-3 | C4417 | F-7 | L3705 | E-1 |
| C2215 | D-4 | C4418 | F-9 | | |
| C2223 | D-4 | C4419 | F-7 | Q1104 | D-7 |
| C2225 | C-4 | C4420 | F-8 | Q1315 | B-6 |
| C2226 | E-3 | C4421 | F-7 | Q1316 | C-7 |
| C2227 | E-4 | C4424 | F-7 | Q1318 | C-6 |
| C2228 | D-3 | C4425 | F-8 | Q1320 | C-6 |
| C2229 | D-4 | C4426 | F-9 | Q1321 | C-6 |
| C2230 | E-4 | C4427 | F-9 | Q1322 | A-6 |
| C2233 | C-4 | C4428 | E-7 | Q1323 | C-6 |
| C2234 | E-4 | C4429 | E-7 | Q1324 | A-6 |
| C2238 | C-4 | C4430 | E-8 | Q1325 | C-6 |
| C2240 | B-3 | C4431 | E-8 | Q1326 | A-6 |
| C2242 | E-6 | C4432 | F-9 | Q1551 | A-5 |
| C2243 | D-6 | C4433 | E-7 | Q1554 | B-5 |
| C2244 | C-3 | C4434 | E-7 | Q2204 | F-4 |
| C2247 | E-4 | C4435 | E-8 | Q3103 | F-4 |
| C2250 | C-4 | C4436 | E-8 | Q3104 | F-6 |
| C2291 | E-6 | C4801 | A-6 | Q3105 | F-5 |
| C2292 | F-7 | C4821 | B-5 | Q3106 | F-5 |
| C2293 | F-6 | C4822 | B-6 | Q3108 | F-6 |
| C3111 | E-6 | | | Q3111 | F-6 |
| C3121 | F-5 | CN1104 | E-7 | Q3116 | F-5 |
| C3122 | F-5 | CN1105 | D-8 | Q3201 | F-3 |
| C3123 | F-5 | CN1107 | A-7 | Q3701 | G-1 |
| C3124 | F-5 | CN1109 | G-1 | Q4401 | G-8 |
| C3126 | F-5 | CN1111 | F-1 | Q4402 | E-8 |
| C3127 | F-5 | CN1113 | F-9 | Q4801 | A-6 |
| C3128 | F-4 | CN1551 | A-5 | Q4802 | A-6 |
| C3131 | F-4 | CN3101 | G-4 | Q4803 | A-6 |
| C3133 | F-4 | CN4401 | G-2 | Q4805 | A-6 |
| C3134 | F-6 | CN4402 | G-6 | | |
| C3135 | F-6 | CN4403 | G-7 | R1124 | D-7 |
| C3136 | F-6 | CN4404 | G-8 | R1129 | C-7 |
| C3138 | F-5 | | | R1130 | C-7 |
| C3139 | F-6 | D1301 | B-8 | R1134 | D-7 |
| C3201 | G-3 | D1302 | B-9 | R1145 | C-7 |
| C3202 | G-2 | D1305 | B-9 | R1308 | A-6 |
| C3203 | G-2 | D1306 | B-9 | R1315 | F-4 |
| C3204 | F-2 | D1551 | A-5 | R1323 | C-7 |
| C3205 | F-3 | D2201 | E-5 | R1327 | B-6 |
| C3206 | F-2 | D2202 | E-4 | R1330 | C-6 |

VC-235 BOARD
(SIDE B)

| | | | | | |
|--------|-----|-------|-----|--------|-----|
| C1101 | A-4 | C3332 | G-1 | C5725 | G-4 |
| C1301 | C-8 | C3333 | G-2 | C5728 | G-4 |
| C1302 | C-7 | C3334 | C-3 | C5730 | G-4 |
| C1303 | C-7 | C3335 | G-2 | C5731 | F-4 |
| C1304 | C-8 | C3337 | F-1 | C5732 | E-3 |
| C1305 | C-8 | C3338 | G-1 | C5733 | F-4 |
| C1306 | C-7 | C3342 | C-6 | C5734 | E-3 |
| C1307 | C-8 | C3343 | C-5 | C5735 | F-4 |
| C1308 | C-8 | C3345 | C-5 | C5736 | G-4 |
| C1309 | C-7 | C3346 | E-5 | C5737 | E-3 |
| C1310 | C-8 | C3348 | E-6 | C5738 | G-4 |
| C1311 | C-7 | C3601 | C-7 | C5739 | E-3 |
| C1312 | C-8 | C3603 | D-7 | C5740 | F-4 |
| C1313 | B-7 | C3604 | C-6 | C5741 | F-4 |
| C1314 | B-8 | C3608 | D-7 | C5742 | G-4 |
| C1315 | B-7 | C3610 | C-8 | C5743 | F-4 |
| C1316 | B-8 | C3611 | D-6 | C5744 | F-4 |
| C1317 | B-8 | C3612 | D-6 | C5745 | F-4 |
| C1318 | B-8 | C3613 | D-7 | C5746 | F-4 |
| C1319 | B-7 | C3614 | D-7 | C5747 | F-4 |
| C1321 | A-8 | C3615 | D-7 | C5748 | F-4 |
| C1323 | B-8 | C3616 | D-7 | C5749 | F-4 |
| C1326 | B-8 | C3617 | D-7 | C5750 | E-2 |
| C1327 | B-8 | C3618 | D-7 | C5751 | E-2 |
| C1328 | A-9 | C3619 | D-7 | C5752 | E-1 |
| C1329 | B-7 | C3620 | D-7 | C5753 | E-1 |
| C1330 | A-8 | C3621 | D-8 | C5754 | E-2 |
| C1331 | A-8 | C3622 | D-6 | C5755 | E-2 |
| C1332 | A-7 | C3626 | D-8 | C5756 | E-1 |
| C1334 | A-9 | C3628 | D-8 | C5757 | E-1 |
| C1337 | A-9 | C3629 | D-8 | C5758 | G-3 |
| C1344 | A-7 | C3630 | E-8 | C5759 | G-4 |
| C1351 | C-9 | C3631 | E-6 | | |
| C1359 | A-9 | C3632 | E-8 | CN1101 | A-4 |
| C1501 | B-5 | C3633 | E-7 | CN1103 | F-1 |
| C1502 | B-5 | C3634 | E-7 | CN1108 | C-9 |
| C1503 | B-5 | C3636 | D-6 | | |
| *C1504 | B-5 | C4501 | G-6 | D1101 | A-4 |
| C1505 | B-5 | C4504 | F-7 | D1102 | A-4 |
| C1506 | B-5 | C4505 | F-7 | D1103 | A-7 |
| C1507 | B-4 | C4506 | F-7 | D1104 | A-8 |
| C1509 | B-4 | C4507 | E-7 | D3301 | E-6 |
| C1511 | C-5 | C4508 | F-7 | D3302 | E-6 |
| C1512 | C-4 | C4509 | G-6 | D3303 | C-6 |
| C1524 | B-4 | C4510 | E-6 | D3304 | C-6 |
| C1556 | A-5 | C4802 | E-8 | D4401 | D-8 |
| C1563 | B-4 | C4803 | E-9 | D4801 | E-8 |
| C1569 | A-5 | C4804 | F-9 | D4802 | E-9 |
| C1571 | A-5 | C4805 | E-9 | D4803 | E-8 |
| C2232 | C-4 | C4806 | A-6 | D4804 | E-9 |
| C3102 | E-5 | C4807 | A-6 | D4808 | A-5 |
| C3104 | F-4 | C4808 | A-7 | D4809 | A-5 |
| C3105 | E-5 | C4809 | A-7 | D4810 | A-6 |
| C3107 | F-4 | C4810 | A-7 | D4811 | E-9 |
| C3108 | F-5 | C4811 | A-7 | | |
| C3109 | F-5 | C4812 | A-6 | FB1501 | B-4 |
| C3110 | F-5 | C4813 | A-6 | FB1502 | B-4 |
| C3112 | F-5 | C4814 | A-6 | FB1503 | B-4 |
| C3113 | F-5 | C4816 | A-6 | FB1505 | B-4 |
| C3114 | F-5 | C4817 | A-6 | FB3303 | F-4 |
| C3115 | F-5 | C4819 | C-6 | FB3304 | G-2 |
| C3116 | F-4 | C4820 | B-5 | FB3307 | C-3 |
| C3117 | F-5 | C4823 | B-5 | FB3601 | E-8 |
| C3118 | F-5 | C4824 | A-5 | FB4501 | F-7 |
| C3119 | F-4 | C4825 | A-5 | FB4901 | G-9 |
| C3120 | F-5 | C4826 | A-5 | | |
| C3137 | G-5 | C4902 | G-8 | IC1301 | C-8 |
| C3141 | G-5 | C4903 | G-7 | IC1501 | B-4 |
| C3142 | G-4 | C4904 | G-7 | IC3101 | F-5 |
| C3143 | G-4 | C4905 | F-7 | IC3102 | F-5 |
| C3144 | G-5 | C4906 | F-7 | IC3301 | D-4 |
| C3301 | D-3 | C4907 | G-7 | IC3302 | D-3 |
| C3302 | F-4 | C4908 | G-8 | IC3303 | F-2 |
| C3303 | C-3 | C4909 | G-8 | IC3603 | D-7 |
| C3305 | E-4 | C4910 | G-8 | IC4501 | F-6 |
| C3306 | D-3 | C4911 | F-9 | IC4502 | E-7 |
| C3307 | E-4 | C5701 | E-2 | IC4801 | E-8 |
| C3308 | E-4 | C5702 | E-2 | IC4802 | E-9 |
| C3309 | C-4 | C5703 | E-2 | IC4803 | B-6 |
| C3310 | E-4 | C5704 | E-2 | IC4901 | F-9 |
| C3311 | C-5 | C5705 | E-3 | IC4902 | F-8 |
| C3312 | E-5 | C5706 | E-3 | IC5701 | F-3 |
| C3313 | E-6 | C5709 | E-2 | IC5702 | E-1 |
| C3314 | E-6 | C5710 | F-2 | | |
| C3315 | C-6 | C5711 | G-2 | L1310 | A-8 |
| C3316 | C-6 | C5712 | G-3 | L1501 | B-4 |
| C3317 | E-6 | C5713 | E-3 | L1551 | A-4 |
| C3318 | E-6 | C5714 | G-3 | L1552 | A-4 |
| C3319 | E-6 | C5715 | E-3 | L1553 | A-5 |
| C3321 | C-5 | C5716 | G-3 | L2202 | C-4 |
| C3322 | E-6 | C5717 | E-2 | L2209 | C-4 |
| C3323 | D-6 | C5718 | F-3 | L3102 | G-5 |
| C3324 | C-6 | C5719 | E-3 | L3303 | E-6 |
| C3325 | C-6 | C5720 | F-3 | L3304 | C-6 |
| C3326 | C-6 | C5721 | F-3 | L3307 | G-2 |
| C3328 | C-6 | C5722 | E-3 | L3601 | C-7 |
| C3329 | G-2 | C5723 | G-3 | L3602 | C-7 |
| C3331 | G-1 | C5724 | E-3 | L5701 | E-8 |

| | | | | | | | | | | PC-77 BOARD (SIDE A) | | PC-77 BOARD (SIDE B) | | | |
|-------|-----|-------|-----|-------|-----|-------|-----|-------|-----|-------------------------|-----|-------------------------|-----|------|-----|
| Q1101 | A-7 | R1348 | B-8 | R3618 | C-6 | R4874 | B-5 | X4801 | C-6 | C101 | A-1 | C104 | A-1 | R140 | A-2 |
| Q1102 | A-7 | R1501 | B-5 | R3622 | D-7 | R4875 | B-5 | X4901 | G-7 | C102 | A-1 | C105 | B-1 | R141 | B-2 |
| Q1103 | A-8 | R1502 | B-5 | R3636 | D-8 | R4877 | B-5 | | | C128 | B-2 | C106 | A-1 | R142 | B-2 |
| Q1301 | A-9 | R1503 | B-5 | R3639 | D-8 | R4878 | B-5 | | | C138 | A-2 | C108 | A-1 | R156 | A-1 |
| Q1302 | B-8 | R1504 | B-4 | R3643 | D-6 | R4879 | B-5 | | | C140 | B-2 | C109 | A-1 | R157 | A-1 |
| Q1303 | A-8 | R1505 | B-4 | R3652 | D-6 | R4880 | B-5 | | | C141 | A-3 | C110 | B-1 | R158 | A-1 |
| Q1304 | A-8 | R1506 | B-4 | R3656 | E-8 | R4881 | B-5 | | | C142 | A-2 | C111 | B-1 | R162 | A-1 |
| Q1305 | B-7 | R1512 | C-4 | R3657 | D-6 | R4882 | B-5 | | | C144 | B-2 | C112 | B-1 | R163 | A-2 |
| Q1306 | A-8 | R1551 | A-5 | R3658 | C-7 | R4883 | B-5 | | | C145 | B-2 | C113 | B-1 | R164 | A-1 |
| Q1307 | B-8 | R1555 | A-5 | R3659 | C-6 | R4884 | B-5 | | | C146 | B-1 | C114 | B-1 | R166 | A-1 |
| Q1308 | A-8 | R1557 | A-5 | R3660 | C-7 | R4885 | A-5 | | | C147 | A-1 | C115 | A-1 | R172 | A-1 |
| Q1309 | A-7 | R1558 | A-5 | R4403 | E-7 | R4886 | A-5 | | | C148 | A-1 | C116 | B-1 | R708 | A-3 |
| Q1310 | B-8 | R1559 | A-5 | R4404 | E-7 | R4887 | A-5 | | | C150 | A-1 | C117 | B-1 | R709 | A-3 |
| Q1311 | B-9 | R3103 | F-4 | R4406 | E-8 | R4888 | A-5 | | | C154 | A-1 | C118 | B-2 | R711 | A-3 |
| Q1312 | B-9 | R3104 | F-4 | R4502 | G-6 | R4892 | A-5 | | | C155 | A-1 | C119 | B-2 | R713 | A-3 |
| Q1313 | B-9 | R3105 | E-5 | R4503 | G-6 | R4894 | B-5 | | | C157 | B-1 | C120 | B-2 | R714 | A-3 |
| Q1314 | B-9 | R3106 | F-5 | R4504 | G-6 | R4895 | A-7 | | | C158 | A-2 | C121 | A-2 | R801 | A-1 |
| Q1317 | C-8 | R3107 | F-5 | R4505 | G-6 | R4897 | A-6 | | | C159 | A-1 | C122 | B-2 | R802 | A-1 |
| Q1319 | C-9 | R3108 | F-5 | R4507 | G-7 | R4898 | A-5 | | | C701 | A-3 | C123 | A-2 | | |
| Q1552 | A-5 | R3109 | F-5 | R4508 | F-7 | R4899 | C-7 | | | C702 | A-3 | C125 | A-2 | X101 | B-1 |
| Q1553 | A-5 | R3110 | F-5 | R4511 | E-7 | R4901 | F-7 | | | C703 | A-3 | C126 | A-2 | | |
| Q3102 | F-4 | R3111 | F-4 | R4512 | F-7 | R4902 | G-7 | | | C704 | A-3 | C127 | B-2 | | |
| Q3107 | G-5 | R3112 | F-5 | R4514 | F-7 | R4903 | G-7 | | | C705 | A-3 | C129 | B-2 | | |
| Q3109 | G-4 | R3113 | F-5 | R4515 | E-7 | R4904 | F-9 | | | C706 | A-3 | C130 | A-2 | | |
| Q3110 | G-5 | R3128 | G-5 | R4516 | E-7 | R4906 | G-7 | | | C710 | A-3 | C131 | A-2 | | |
| Q3112 | F-4 | R3139 | G-4 | R4517 | E-6 | R4908 | E-8 | | | C720 | A-3 | C132 | A-2 | | |
| Q3113 | F-4 | R3140 | F-4 | R4518 | E-6 | R4910 | E-8 | | | C721 | A-3 | C133 | A-2 | | |
| Q3114 | F-5 | R3141 | G-5 | R4520 | E-7 | R4911 | E-8 | | | C727 | A-3 | C134 | A-2 | | |
| Q3115 | F-5 | R3142 | F-5 | R4521 | E-6 | R4912 | E-8 | | | C728 | A-3 | C135 | A-2 | | |
| Q3301 | D-6 | R3146 | F-4 | R4522 | E-6 | R4913 | E-8 | | | C801 | A-1 | C136 | A-2 | | |
| Q3302 | D-6 | R3305 | D-3 | R4523 | E-6 | R4914 | E-8 | | | C802 | A-1 | C137 | A-3 | | |
| Q3303 | D-6 | R3309 | E-6 | R4524 | E-6 | R4915 | G-8 | | | | | C143 | A-3 | | |
| Q3304 | D-6 | R3310 | E-6 | R4525 | E-6 | R4916 | G-8 | | | D101 | A-2 | C151 | A-1 | | |
| Q3305 | D-6 | R3311 | E-6 | R4526 | E-6 | R4917 | E-8 | | | D102 | B-1 | C156 | A-1 | | |
| Q3306 | D-6 | R3312 | E-6 | R4527 | E-7 | R4918 | G-8 | | | D104 | A-1 | C707 | A-3 | | |
| Q3307 | D-6 | R3313 | E-6 | R4528 | E-7 | R4919 | G-7 | | | | | C708 | A-3 | | |
| Q3308 | D-6 | R3314 | D-6 | R4529 | E-7 | R4920 | F-9 | | | FB101 | A-1 | C711 | A-3 | | |
| Q3602 | C-7 | R3315 | D-5 | R4530 | F-7 | R4921 | F-9 | | | FB105 | B-3 | C712 | A-3 | | |
| Q3603 | D-7 | R3316 | D-5 | R4531 | F-7 | R4922 | F-9 | | | FB106 | B-1 | C713 | A-3 | | |
| Q3604 | C-6 | R3317 | C-5 | R4532 | E-6 | R4923 | F-9 | | | FB107 | A-1 | C714 | A-3 | | |
| Q3605 | D-6 | R3318 | C-6 | R4533 | F-5 | R4924 | F-9 | | | | | C715 | A-3 | | |
| Q3606 | D-7 | R3319 | C-6 | R4534 | F-5 | R4925 | F-9 | | | IC104 | B-1 | C717 | A-3 | | |
| Q4804 | E-8 | R3320 | E-6 | R4803 | E-8 | R4926 | F-9 | | | IC107 | A-3 | C718 | B-3 | | |
| Q4806 | E-9 | R3321 | C-5 | R4804 | A-5 | R4927 | F-9 | | | IC108 | A-2 | C722 | A-3 | | |
| Q4807 | A-6 | R3322 | E-6 | R4808 | E-8 | R4928 | F-9 | | | IC109 | A-2 | | | | |
| Q4808 | A-6 | R3323 | C-6 | R4811 | E-7 | R4929 | F-9 | | | IC701 | A-3 | CN801 | A-1 | | |
| Q4809 | A-5 | R3324 | C-6 | R4813 | A-7 | R4930 | F-9 | | | | | | | | |
| Q4810 | C-7 | R3325 | C-6 | R4814 | B-7 | R4931 | F-9 | | | Q101 | A-1 | D103 | A-2 | | |
| Q4811 | E-9 | R3326 | C-5 | R4815 | B-7 | R4932 | F-9 | | | Q102 | A-1 | | | | |
| Q4812 | E-9 | R3327 | D-6 | R4816 | B-7 | R4933 | F-9 | | | Q105 | A-2 | FB102 | A-3 | | |
| Q4901 | F-7 | R3328 | D-6 | R4817 | B-7 | R4934 | F-9 | | | Q106 | A-2 | FB103 | A-2 | | |
| Q5701 | G-3 | R3329 | D-6 | R4818 | B-7 | R4935 | G-8 | | | | | FB104 | A-3 | | |
| Q5703 | E-2 | R3331 | D-6 | R4819 | B-7 | R4936 | G-8 | | | R102 | A-1 | FB801 | A-1 | | |
| Q5704 | G-2 | R3332 | D-6 | R4820 | A-7 | R4938 | F-9 | | | R103 | A-1 | | | | |
| Q5706 | E-2 | R3333 | G-2 | R4821 | A-7 | R4939 | F-9 | | | R104 | A-1 | IC103 | A-1 | | |
| Q5708 | E-2 | R3334 | D-6 | R4822 | A-7 | R4940 | F-9 | | | R105 | A-1 | IC105 | A-2 | | |
| Q5714 | G-3 | R3335 | D-6 | R4823 | E-9 | R4941 | F-9 | | | R107 | A-1 | IC702 | A-3 | | |
| Q5715 | G-3 | R3336 | D-6 | R4824 | F-9 | R4942 | F-9 | | | R129 | A-2 | | | | |
| | | R3337 | G-2 | R4825 | B-7 | R4943 | G-9 | | | R131 | A-2 | L101 | A-3 | | |
| | | R3338 | D-6 | R4826 | B-7 | R4944 | F-9 | | | R134 | A-2 | L102 | A-1 | | |
| R1101 | A-4 | R3340 | D-6 | R4827 | B-7 | R5701 | E-2 | | | R143 | A-2 | L701 | A-3 | | |
| R1127 | G-8 | R3341 | D-6 | R4828 | B-7 | R5702 | E-2 | | | R144 | B-3 | L702 | A-3 | | |
| R1128 | G-8 | R3343 | D-6 | R4829 | B-7 | R5707 | E-2 | | | R145 | B-3 | L703 | A-3 | | |
| R1131 | G-9 | R3346 | G-1 | R4830 | B-7 | R5708 | E-2 | | | R146 | B-3 | L704 | A-3 | | |
| R1132 | G-9 | R3349 | G-2 | R4831 | A-5 | R5709 | E-2 | | | R147 | B-3 | L705 | B-3 | | |
| R1137 | A-8 | R3350 | G-1 | R4832 | C-7 | R5710 | E-2 | | | R148 | B-3 | L706 | A-3 | | |
| R1141 | A-7 | R3351 | D-6 | R4833 | A-6 | R5711 | G-3 | | | R149 | B-3 | | | | |
| R1142 | C-9 | R3352 | E-1 | R4834 | A-6 | R5712 | G-3 | | | R150 | B-3 | Q103 | A-1 | | |
| R1143 | C-9 | R3356 | C-6 | R4835 | A-6 | R5714 | E-3 | | | R151 | B-2 | Q104 | A-2 | | |
| R1144 | D-9 | R3358 | D-6 | R4836 | A-6 | R5715 | E-3 | | | R154 | A-2 | Q701 | A-2 | | |
| R1146 | A-8 | R3360 | C-6 | R4837 | C-6 | R5717 | G-3 | | | R159 | B-2 | Q702 | A-3 | | |
| R1147 | A-8 | R3361 | F-1 | R4838 | C-6 | R5718 | G-3 | | | R160 | B-2 | | | | |
| R1301 | C-8 | R3362 | G-1 | R4839 | C-6 | R5719 | G-3 | | | R165 | A-1 | R106 | A-1 | | |
| R1302 | C-8 | R3364 | F-1 | R4840 | C-6 | R5720 | E-3 | | | R167 | A-1 | R108 | A-1 | | |
| R1303 | C-8 | R3365 | G-1 | R4841 | A-7 | R5721 | E-3 | | | R168 | A-1 | R109 | A-1 | | |
| R1304 | B-8 | R3367 | F-1 | R4842 | A-7 | R5722 | E-3 | | | R170 | A-1 | R110 | B-1 | | |
| R1305 | C-8 | R3368 | F-1 | R4843 | A-7 | R5723 | E-3 | | | R701 | A-3 | R111 | A-1 | | |
| R1306 | C-7 | R3369 | G-1 | R4844 | A-7 | R5724 | F-4 | | | R702 | A-3 | R112 | A-1 | | |
| R1307 | C-8 | R3370 | F-1 | R4845 | C-7 | R5725 | F-4 | | | R703 | A-3 | R113 | B-1 | | |
| R1309 | C-8 | R3371 | G-1 | R4846 | A-6 | R5730 | F-4 | | | R704 | A-3 | R114 | B-1 | | |
| R1310 | C-7 | R3372 | F-1 | R4847 | A-5 | R5731 | F-1 | | | R706 | A-3 | R117 | B-2 | | |
| R1311 | C-7 | R3375 | D-3 | R4848 | A-6 | R5732 | F-1 | | | R707 | A-3 | R118 | B-2 | | |
| R1312 | C-8 | R3376 | D-3 | R4849 | A-6 | R5733 | F-4 | | | R715 | A-3 | R119 | B-2 | | |
| R1313 | C-7 | R3377 | E-5 | R4850 | A-5 | R5735 | E-1 | | | R716 | A-1 | R120 | B-2 | | |
| R1314 | C-8 | R3378 | C-5 | R4852 | A-5 | R5736 | E-1 | | | | | R121 | B-2 | | |
| R1316 | B-9 | R3379 | C-5 | R4853 | A-5 | R5737 | E-1 | | | | | R122 | B-2 | | |
| R1317 | B-9 | R3380 | E-4 | R4856 | E-9 | R5738 | E-1 | | | | | R123 | B-2 | | |
| R1318 | B-9 | R3381 | E-6 | R4861 | A-6 | R5739 | E-1 | | | | | R124 | B-2 | | |
| R1319 | B-9 | R3385 | E-4 | R4862 | A-6 | R5740 | E-1 | | | | | R125 | B-2 | | |
| R1320 | B-9 | R3386 | D-3 | R4863 | C-6 | R5741 | E-1 | | | | | R126 | B-2 | | |
| R1321 | B-9 | R3387 | D-7 | R4864 | C-6 | R5742 | G-3 | | | | | R128 | B-2 | | |
| R1322 | B-9 | R3388 | D-7 | R4866 | C-6 | R5743 | G-3 | | | | | R130 | B-2 | | |
| R1324 | C-9 | R3604 | D-8 | R4867 | A-6 | R5744 | G-3 | | | | | R133 | B-2 | | |
| R1325 | C-9 | R3607 | C-7 | R4868 | A-6 | R5745 | G-3 | | | | | R135 | B-2 | | |
| R1326 | C-8 | R3609 | D-6 | R4869 | A-6 | R5746 | G-3 | | | | | R136 | B-2 | | |
| R1328 | C-9 | R3611 | C-7 | R4871 | C-6 | | | | | | | R137 | B-2 | | |
| R1329 | C-9 | R3612 | C-6 | R4872 | C-6 | X1501 | B-3 | | | | | R138 | A-2 | | |
| R1345 | B-7 | R3617 | D-7 | R4873 | C-6 | X3301 | F-4 | | | | | R139 | A-2 | | |
| R1347 | B-8 | | | | | | | | | | | | | | |

| SE-104/112/114 BOARD (SIDE A) | | SE-104/112/114 BOARD (SIDE B) | | MI-37 BOARD (SIDE A) | | MI-37 BOARD (SIDE B) | | CF-69 BOARD (SIDE A) | | CF-69 BOARD (SIDE B) | | | |
|-------------------------------|-----|-------------------------------|-----|----------------------|-----|----------------------|-----|----------------------|-----|----------------------|-----|-------|-----|
| C201 | D-2 | C220 | G-3 | C3905 | A-3 | R5829 | A-2 | C3900 | B-3 | CN003 | E-1 | BH001 | B-3 |
| C202 | D-2 | C221 | G-3 | C3906 | A-3 | R5830 | A-2 | C3901 | A-3 | CN008 | B-1 | | |
| C203 | D-2 | | | C3908 | A-3 | R5831 | A-2 | C3902 | A-3 | | | C001 | E-1 |
| C204 | B-2 | CN202 | F-2 | C3910 | A-3 | R5834 | A-2 | C3904 | A-3 | D009 | E-4 | | |
| C207 | G-2 | | | C3912 | B-3 | R5846 | A-2 | C3907 | B-2 | | | CN001 | B-4 |
| C208 | G-2 | | | C3913 | B-3 | R5847 | A-1 | C3909 | B-3 | R001 | D-6 | CN002 | E-1 |
| C209 | F-2 | D202 | D-3 | C3914 | B-3 | | | C3911 | B-3 | R002 | B-5 | CN004 | C-1 |
| C210 | F-2 | D211 | D-2 | C3917 | B-3 | | | C3915 | A-3 | R003 | C-6 | CN005 | B-1 |
| C211 | F-2 | | | C3918 | B-3 | | | C3916 | A-3 | R004 | D-7 | CN006 | A-2 |
| C212 | E-2 | L201 | G-2 | C3921 | B-2 | | | C3919 | A-3 | R005 | E-3 | CN007 | B-2 |
| C214 | F-2 | | | C3923 | B-2 | | | C3920 | A-3 | R006 | D-6 | | |
| C223 | B-2 | R212 | C-2 | C3924 | A-3 | | | C3922 | A-2 | R007 | B-5 | D001 | E-1 |
| C225 | A-2 | R215 | C-3 | C3926 | A-3 | | | C3925 | A-3 | R008 | C-6 | D005 | A-7 |
| C226 | A-2 | R218 | D-3 | C3927 | A-2 | | | C3928 | B-3 | R009 | D-7 | D006 | A-7 |
| | | R219 | D-2 | C3929 | A-3 | | | C3931 | B-2 | R014 | D-7 | D008 | A-3 |
| | | R220 | D-3 | C3935 | A-3 | | | C3933 | B-2 | R015 | D-6 | | |
| CN201 | E-3 | R227 | D-3 | C3936 | A-2 | | | C3934 | A-3 | R016 | B-5 | L001 | B-2 |
| | | | | C5806 | A-1 | | | C5810 | A-1 | R017 | C-6 | L002 | B-6 |
| D212 | A-2 | VDR001 | D-3 | C5807 | A-1 | | | C5812 | A-1 | R020 | D-6 | L003 | A-5 |
| | | | | C5808 | B-1 | | | | | R021 | A-6 | | |
| IC201 | F-2 | | | C5809 | B-1 | | | CN5801 | A-1 | R022 | C-5 | Q002 | C-6 |
| | | | | C5813 | A-1 | | | CN5802 | A-2 | R023 | D-7 | Q003 | C-6 |
| J201 | B-3 | | | C5814 | B-1 | | | CN5803 | A-2 | R024 | D-5 | | |
| J202 | D-3 | | | C5815 | B-1 | | | CN5804 | B-3 | R025 | B-6 | R010 | C-6 |
| | | | | C5816 | B-1 | | | | | R026 | C-5 | R011 | C-6 |
| R201 | D-2 | | | C5817 | A-1 | | | D3903 | B-3 | R027 | C-7 | R012 | C-6 |
| R202 | D-2 | | | C5818 | B-1 | | | D3904 | B-2 | R030 | B-6 | R013 | C-6 |
| R203 | D-2 | | | C5819 | B-1 | | | D5806 | A-1 | R031 | D-4 | R019 | C-6 |
| R204 | D-2 | | | C5820 | A-1 | | | D5807 | B-1 | R032 | B-7 | R029 | A-6 |
| R205 | E-2 | | | C5821 | A-1 | | | | | R038 | B-6 | R043 | A-3 |
| R206 | G-3 | | | C5822 | A-1 | | | F3900 | B-2 | R039 | D-4 | R044 | A-2 |
| R207 | G-3 | | | C5823 | B-1 | | | | | R040 | A-7 | R045 | A-3 |
| R208 | F-3 | | | C5824 | A-1 | | | L3900 | B-3 | R052 | B-5 | R048 | A-3 |
| R209 | F-3 | | | C5825 | B-1 | | | L3901 | B-3 | R053 | B-5 | R051 | A-2 |
| R211 | F-3 | | | C5826 | A-2 | | | | | R054 | C-1 | | |
| R213 | C-3 | | | C5827 | B-1 | | | R3901 | B-2 | | | | |
| R214 | C-2 | | | C5829 | B-1 | | | R3902 | B-2 | S001 | C-6 | | |
| R217 | C-3 | | | C5830 | A-2 | | | R3903 | B-3 | S002 | B-5 | | |
| R224 | A-2 | | | C5832 | A-2 | | | R3904 | B-3 | S003 | D-6 | | |
| R225 | A-2 | | | C5833 | A-2 | | | R3905 | A-3 | S004 | B-4 | | |
| R226 | B-2 | | | C5835 | B-1 | | | R3906 | B-2 | S005 | C-5 | | |
| | | | | C5836 | B-1 | | | R3908 | B-3 | S006 | E-7 | | |
| SE201 | D-2 | | | C5838 | A-2 | | | R3909 | A-3 | S007 | D-6 | | |
| SE202 | C-2 | | | C5839 | B-2 | | | R3910 | A-2 | S008 | A-5 | | |
| | | | | C5840 | A-2 | | | R3911 | A-3 | S009 | C-5 | | |
| | | | | C5841 | A-2 | | | R3917 | A-3 | S010 | D-5 | | |
| | | | | C5842 | A-1 | | | R3918 | A-3 | S011 | A-6 | | |
| | | | | C5843 | A-1 | | | R3938 | B-2 | S012 | B-4 | | |
| | | | | C5844 | A-1 | | | R3939 | B-2 | S013 | C-7 | | |
| | | | | | | | | R5805 | A-1 | S014 | D-4 | | |
| | | | | D3900 | B-3 | | | R5806 | A-1 | S015 | A-4 | | |
| | | | | D3901 | B-1 | | | R5835 | A-1 | S016 | C-4 | | |
| | | | | | | | | R5836 | A-1 | S017 | C-7 | | |
| | | | | IC3900 | B-3 | | | R5837 | A-1 | S018 | B-6 | | |
| | | | | IC3901 | A-3 | | | R5840 | A-1 | S019 | B-7 | | |
| | | | | IC5801 | A-1 | | | R5841 | A-1 | S020 | A-7 | | |
| | | | | | | | | R5845 | A-2 | | | | |
| | | | | L3902 | B-3 | | | | | | | | |
| | | | | L3903 | B-2 | | | VDR801 | A-2 | | | | |
| | | | | L3904 | B-2 | | | VDR803 | A-1 | | | | |
| | | | | L5803 | A-2 | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | Q3901 | B-1 | | | | | | | | |
| | | | | Q3902 | A-2 | | | | | | | | |
| | | | | Q3903 | A-2 | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | R3900 | B-3 | | | | | | | | |
| | | | | R3912 | B-3 | | | | | | | | |
| | | | | R3913 | B-3 | | | | | | | | |
| | | | | R3916 | A-3 | | | | | | | | |
| | | | | R3919 | A-3 | | | | | | | | |
| | | | | R3920 | A-3 | | | | | | | | |
| | | | | R3921 | A-3 | | | | | | | | |
| | | | | R3922 | A-2 | | | | | | | | |
| | | | | R3923 | A-2 | | | | | | | | |
| | | | | R3924 | A-3 | | | | | | | | |
| | | | | R3936 | A-2 | | | | | | | | |
| | | | | R5801 | B-1 | | | | | | | | |
| | | | | R5802 | B-1 | | | | | | | | |
| | | | | R5803 | B-1 | | | | | | | | |
| | | | | R5804 | A-2 | | | | | | | | |
| | | | | R5807 | A-1 | | | | | | | | |
| | | | | R5809 | A-1 | | | | | | | | |
| | | | | R5814 | B-1 | | | | | | | | |
| | | | | R5815 | A-1 | | | | | | | | |
| | | | | R5816 | B-1 | | | | | | | | |
| | | | | R5817 | A-1 | | | | | | | | |
| | | | | R5818 | B-1 | | | | | | | | |
| | | | | R5819 | A-1 | | | | | | | | |
| | | | | R5820 | A-2 | | | | | | | | |
| | | | | R5821 | B-1 | | | | | | | | |
| | | | | R5822 | B-1 | | | | | | | | |
| | | | | R5823 | A-2 | | | | | | | | |
| | | | | R5824 | A-2 | | | | | | | | |
| | | | | R5825 | B-1 | | | | | | | | |
| | | | | R5826 | B-1 | | | | | | | | |
| | | | | R5827 | A-2 | | | | | | | | |
| | | | | R5828 | B-1 | | | | | | | | |

| CF-70 BOARD (SIDE A) | | CF-70 BOARD (SIDE B) | | CF-72 BOARD (SIDE A) | | CF-72 BOARD (SIDE B) | | VF-141 BOARD (SIDE A) | | VF-141 BOARD (SIDE B) | | PD-117 BOARD (SIDE A) | | PD-117 BOARD (SIDE B) | |
|-------------------------|-----|-------------------------|-----|-------------------------|-----|-------------------------|-----|--------------------------|-----|--------------------------|-----|--------------------------|-----|--------------------------|-----|
| C001 | C-2 | BH001 | A-1 | CN009 | A-1 | BH001 | B-1 | C4501 | A-1 | C4503 | A-1 | C5504 | B-4 | C5501 | D-4 |
| | | | | | | | | C4504 | A-1 | C4507 | A-1 | C5505 | D-5 | C5503 | D-5 |
| D001 | C-2 | C009 | A-3 | D002 | C-1 | C001 | C-3 | C4510 | A-2 | C4508 | A-1 | C5506 | D-5 | C5508 | B-4 |
| D002 | B-2 | C010 | A-2 | D005 | B-1 | C008 | A-3 | C4515 | A-2 | C4509 | A-1 | C5507 | D-5 | C5509 | C-4 |
| D005 | B-2 | C011 | B-3 | D006 | B-1 | C009 | A-2 | C4516 | A-2 | C4511 | A-2 | C5515 | B-4 | C5510 | C-5 |
| D006 | B-2 | | | D009 | C-1 | C010 | A-2 | C4517 | B-2 | C4512 | A-2 | C5516 | B-4 | C5511 | C-4 |
| | | CN001 | A-3 | | | | | C4521 | B-2 | C4513 | B-2 | C5520 | C-5 | C5512 | C-4 |
| R001 | A-4 | CN002 | C-1 | R001 | B-1 | CN001 | A-3 | C4524 | B-2 | C4514 | B-2 | C5521 | C-3 | C5513 | C-5 |
| R002 | A-3 | CN003 | C-2 | R002 | A-1 | CN002 | C-1 | C4527 | A-2 | C4518 | B-2 | C5522 | C-3 | C5514 | B-4 |
| R003 | A-4 | CN004 | A-1 | R003 | B-1 | CN003 | C-3 | | | C4519 | B-2 | C5523 | A-4 | C5517 | B-5 |
| R004 | A-4 | CN005 | B-1 | R004 | A-1 | CN004 | B-1 | CN4502 | A-2 | C4520 | B-2 | C5524 | C-4 | C5518 | B-5 |
| R005 | A-3 | CN006 | A-2 | R005 | B-1 | CN005 | B-1 | | | C4523 | A-2 | C5528 | C-4 | C5519 | B-4 |
| R006 | B-4 | CN007 | A-2 | R006 | B-1 | CN006 | A-2 | D4502 | A-2 | C4526 | B-1 | C5530 | B-5 | C5527 | C-5 |
| R007 | A-3 | CN008 | B-1 | R007 | A-1 | CN008 | B-2 | D4503 | B-2 | C4527 | | C5531 | A-5 | C5529 | B-4 |
| R008 | B-4 | | | R008 | B-1 | | | D4504 | B-2 | | | C5603 | C-2 | C5602 | C-2 |
| R009 | C-4 | D008 | A-3 | R009 | A-1 | D001 | C-3 | | | CN4501 | A-1 | C5607 | A-1 | C5604 | B-2 |
| R014 | B-4 | D009 | C-3 | R014 | A-1 | D008 | A-3 | FB4505 | A-1 | | | | | C5605 | A-2 |
| R015 | B-4 | | | R015 | C-1 | | | | | FB4502 | B-2 | CN5501 | A-5 | C5606 | A-2 |
| R016 | A-3 | L001 | A-2 | R016 | A-1 | L001 | A-3 | IC4502 | A-2 | FB4505 | | CN5502 | C-5 | C5608 | C-2 |
| R017 | B-3 | L002 | A-2 | R017 | B-1 | L002 | A-2 | | | | | CN5604 | A-1 | C5704 | C-3 |
| R020 | C-4 | L003 | B-3 | R020 | C-1 | L003 | A-2 | L4501 | A-1 | IC4501 | A-2 | CN5701 | D-2 | | |
| R021 | A-3 | | | R021 | A-1 | | | L4504 | A-2 | | | CN5702 | D-5 | D5503 | B-4 |
| R022 | B-3 | Q002 | B-3 | R022 | B-1 | Q002 | B-3 | | | R4513 | B-2 | CN5703 | D-1 | D5601 | A-2 |
| R023 | B-4 | Q003 | B-3 | R024 | C-2 | Q003 | B-3 | Q4504 | A-2 | R4515 | A-2 | CN5704 | D-3 | D5602 | A-1 |
| R024 | C-3 | | | R025 | A-2 | Q007 | B-2 | | | R4516 | A-2 | CN5705 | D-3 | | |
| R025 | A-3 | R010 | B-3 | R026 | B-2 | | | R4505 | B-1 | R4517 | A-2 | | | FB5503 | C-4 |
| R026 | B-3 | R011 | B-3 | R030 | A-2 | R010 | B-3 | R4507 | A-1 | R4518 | A-2 | D5502 | B-4 | | |
| R027 | B-4 | R012 | B-3 | R031 | B-2 | R011 | B-3 | R4508 | A-2 | R4520 | A-2 | | | IC5501 | C-4 |
| R030 | A-3 | R013 | B-3 | R040 | A-2 | R012 | B-3 | R4522 | A-2 | R4521 | A-2 | FB5502 | C-4 | IC5601 | B-3 |
| R031 | B-3 | R019 | B-4 | R041 | B-2 | R013 | B-3 | R4524 | B-2 | R4526 | B-2 | | | IC5602 | A-2 |
| R033 | A-4 | R029 | B-2 | | | R019 | B-3 | R4525 | B-2 | R4527 | A-2 | IC5502 | B-4 | IC5701 | C-3 |
| R040 | A-4 | R050 | A-3 | S001 | B-1 | R029 | A-2 | R4529 | B-2 | R4528 | A-2 | IC5503 | B-4 | | |
| R041 | B-3 | R051 | A-2 | S002 | A-1 | R045 | B-2 | R4530 | B-1 | | | | | L5501 | D-4 |
| R042 | A-4 | R052 | A-3 | S003 | B-1 | R046 | B-2 | R4534 | A-1 | | | L5505 | B-4 | L5504 | B-4 |
| R045 | A-2 | R053 | A-3 | S004 | A-2 | R047 | B-2 | R4542 | B-1 | | | L5601 | A-2 | | |
| R046 | A-2 | R054 | B-1 | S005 | B-1 | R050 | B-1 | R4543 | B-2 | | | | | Q5501 | B-4 |
| R047 | A-2 | | | S007 | B-1 | R051 | B-2 | R4544 | A-1 | | | Q5502 | C-4 | Q5601 | B-3 |
| | | | | S008 | A-1 | R052 | A-3 | | | | | Q5503 | B-5 | Q5602 | B-2 |
| S001 | B-4 | | | S009 | B-1 | R053 | A-3 | | | | | Q5504 | B-5 | Q5603 | A-2 |
| S002 | A-3 | | | S010 | B-1 | R054 | C-1 | | | | | Q5505 | B-5 | Q5604 | A-2 |
| S003 | B-4 | | | S011 | A-1 | | | | | | | Q5506 | B-5 | | |
| S004 | A-3 | | | S012 | B-2 | | | | | | | | | R5501 | D-5 |
| S005 | B-3 | | | S014 | C-2 | | | | | | | R5512 | B-4 | R5503 | D-4 |
| S006 | B-4 | | | S015 | A-2 | | | | | | | R5513 | B-4 | R5504 | B-4 |
| S007 | C-4 | | | S016 | B-2 | | | | | | | R5516 | C-5 | R5505 | C-5 |
| S008 | A-3 | | | S019 | A-1 | | | | | | | R5517 | B-5 | R5506 | C-4 |
| S009 | B-3 | | | | | | | | | | | R5521 | B-5 | R5507 | C-4 |
| S010 | C-3 | | | | | | | | | | | R5553 | B-5 | R5508 | C-4 |
| S011 | A-4 | | | | | | | | | | | R5559 | B-4 | R5509 | C-4 |
| S012 | B-3 | | | | | | | | | | | R5562 | B-5 | R5510 | C-4 |
| S013 | B-4 | | | | | | | | | | | R5563 | B-5 | R5511 | C-4 |
| S014 | C-3 | | | | | | | | | | | R5564 | B-5 | R5514 | B-5 |
| S015 | A-3 | | | | | | | | | | | R5565 | B-5 | R5515 | A-5 |
| S016 | B-3 | | | | | | | | | | | R5566 | A-5 | R5518 | B-5 |
| S017 | A-4 | | | | | | | | | | | R5567 | B-5 | R5519 | A-4 |
| S019 | A-4 | | | | | | | | | | | R5568 | C-3 | R5520 | A-4 |
| S020 | A-4 | | | | | | | | | | | R5569 | C-5 | R5522 | A-5 |
| S021 | A-4 | | | | | | | | | | | R5702 | C-5 | R5523 | B-5 |
| | | | | | | | | | | | | | | R5524 | B-5 |
| | | | | | | | | | | | | T5601 | B-1 | R5525 | B-5 |
| | | | | | | | | | | | | | | R5551 | B-4 |
| | | | | | | | | | | | | | | R5557 | D-4 |
| | | | | | | | | | | | | | | R5560 | B-4 |
| | | | | | | | | | | | | | | R5608 | B-3 |
| | | | | | | | | | | | | | | R5609 | B-3 |
| | | | | | | | | | | | | | | R5610 | B-2 |
| | | | | | | | | | | | | | | R5611 | A-2 |
| | | | | | | | | | | | | | | R5612 | A-2 |
| | | | | | | | | | | | | | | R5613 | B-2 |
| | | | | | | | | | | | | | | R5614 | B-3 |
| | | | | | | | | | | | | | | R5616 | A-2 |
| | | | | | | | | | | | | | | R5617 | A-2 |
| | | | | | | | | | | | | | | R5618 | A-2 |
| | | | | | | | | | | | | | | R5704 | A-5 |
| | | | | | | | | | | | | | | R5706 | B-5 |
| | | | | | | | | | | | | | | R5707 | D-5 |
| | | | | | | | | | | | | | | R5708 | D-5 |
| | | | | | | | | | | | | | | R5711 | D-3 |
| | | | | | | | | | | | | | | R5712 | C-3 |
| | | | | | | | | | | | | | | R5714 | D-3 |
| | | | | | | | | | | | | | | S5701 | A-5 |
| | | | | | | | | | | | | | | S5702 | B-5 |
| | | | | | | | | | | | | | | S5703 | C-5 |
| | | | | | | | | | | | | | | S5704 | D-5 |

PD-118 BOARD
(SIDE A)

| | | | |
|-------|-----|-------|-----|
| C5501 | A-2 | R5524 | A-3 |
| C5503 | B-3 | R5525 | A-3 |
| C5504 | A-3 | R5551 | A-3 |
| C5505 | B-3 | R5553 | B-3 |
| C5506 | B-3 | R5557 | B-3 |
| C5507 | B-3 | R5559 | B-3 |
| C5508 | A-3 | R5560 | A-3 |
| C5509 | B-2 | R5562 | A-3 |
| C5510 | B-2 | R5563 | A-3 |
| C5511 | A-2 | R5564 | A-3 |
| C5512 | A-2 | R5565 | A-3 |
| C5513 | B-2 | R5566 | A-3 |
| C5514 | B-2 | R5567 | A-3 |
| C5515 | A-2 | R5568 | A-3 |
| C5516 | A-2 | R5569 | B-3 |
| C5517 | B-2 | R5608 | A-1 |
| C5518 | B-2 | R5609 | B-2 |
| C5519 | B-2 | R5610 | A-1 |
| C5520 | B-3 | R5611 | A-1 |
| C5521 | A-3 | R5612 | A-1 |
| C5522 | A-3 | R5613 | A-1 |
| C5523 | A-3 | R5614 | A-1 |
| C5524 | A-3 | R5616 | A-1 |
| C5527 | B-3 | R5617 | A-1 |
| C5528 | B-3 | R5618 | A-2 |
| C5529 | A-3 | R5702 | B-3 |
| C5530 | A-3 | R5704 | B-3 |
| C5531 | A-3 | R5706 | B-3 |
| C5602 | B-1 | R5707 | B-3 |
| C5603 | B-1 | R5708 | B-3 |
| C5604 | A-1 | R5712 | A-2 |
| C5605 | A-1 | R5714 | B-3 |
| C5606 | A-1 | | |
| C5607 | A-1 | T5601 | A-1 |
| C5704 | A-2 | | |

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|--------|-----|
| CN5501 | A-3 |
| CN5502 | B-3 |
| CN5604 | A-1 |
| CN5701 | B-1 |
| CN5702 | B-3 |
| CN5703 | B-1 |
| CN5704 | B-2 |
| CN5705 | B-2 |
| CN5707 | B-3 |

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| D5502 | A-2 |
| D5503 | B-3 |
| D5601 | A-1 |
| D5702 | B-3 |

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|--------|-----|
| IC5501 | B-2 |
| IC5502 | A-3 |
| IC5503 | A-3 |
| IC5601 | B-1 |
| IC5602 | A-1 |
| IC5701 | A-2 |

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|-------|-----|
| L5501 | B-2 |
| L5502 | B-2 |
| L5503 | B-1 |
| L5504 | B-1 |
| L5505 | A-2 |
| L5601 | B-1 |

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|-------|-----|
| Q5501 | A-3 |
| Q5502 | A-3 |
| Q5503 | A-3 |
| Q5504 | A-3 |
| Q5505 | A-3 |
| Q5506 | A-3 |
| Q5601 | B-2 |
| Q5602 | A-1 |
| Q5603 | A-1 |
| Q5604 | A-1 |

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| R5501 | B-3 |
| R5503 | B-3 |
| R5504 | A-3 |
| R5505 | B-3 |
| R5506 | A-2 |
| R5507 | A-2 |
| R5508 | A-2 |
| R5509 | A-2 |
| R5510 | A-2 |
| R5511 | A-2 |
| R5512 | A-2 |
| R5513 | A-2 |
| R5514 | A-3 |
| R5515 | A-3 |
| R5516 | B-3 |
| R5517 | A-3 |
| R5518 | A-3 |
| R5519 | A-2 |
| R5520 | A-2 |
| R5521 | A-3 |
| R5522 | A-3 |
| R5523 | A-3 |

SECTION 5 ADJUSTMENTS

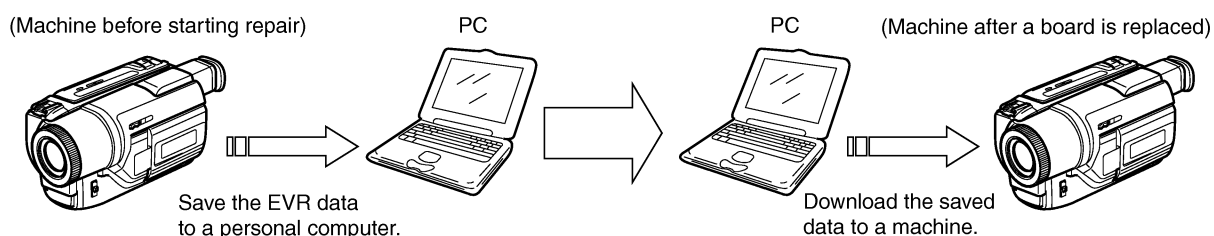
1. Before starting adjustment

EVR Data Re-writing Procedure When Replacing Board

The data that is stored in the repair board, is not necessarily correct.
Perform either procedure 1 or procedure 2 or procedure 3 when replacing board.

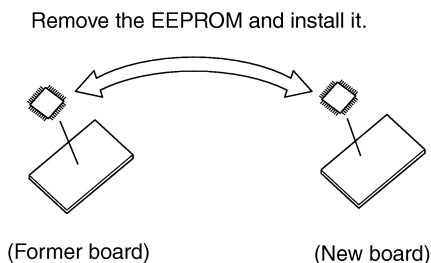
Procedure 1

Save the EVR data of the machine in which a board is going to be replaced. Download the saved data after a board is replaced.



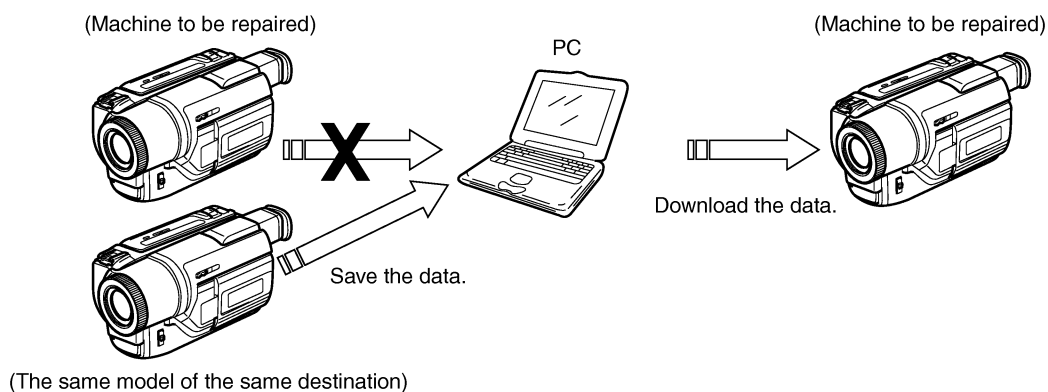
Procedure 2

Remove the EEPROM from the board of the machine that is going to be repaired. Install the removed EEPROM to the replaced board.



Procedure 3

When the data cannot be saved due to defective EEPROM, or when the EEPROM cannot be removed or installed, save the data from the same model of the same destination, and download it.



After the EVR data is saved and downloaded, check the respective items of the EVR data.
(Refer to page 5-3 for the items to be checked)

1-1. Adjusting items when replacing main parts and boards

• Adjusting items when replacing main parts

When replacing main parts, adjust the items indicated by ● in the following table.

| Adjustment Section | Adjustment | Replaced part | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|-------------------|----------------|--|---------------------------------------|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---|--|--------------------------------------|------------------------------|---------------------------------------|---|--------------------------------------|--------------------------------------|--|---|----------------------------------|--|--|------------------------------------|--|-----------------------------------|-------------------------------------|------------------------------------|---|
| | | Block replacement | | | | | | | Mounted part replacement | | | | | | | | | | | | | | | | | | | |
| | | Lens device | Mechanism deck | B/W CRT EVF block V901 (*1) (Picture tube) | LCD EVF block LCD903 (*2) (LCD panel) | LCD block LCD901 (LCD panel) | LCD block ND901 (Back light) | Mechanism deck M901 (Drum assembly) | Mechanism deck M902 (Capstan motor) | CD-242/244/266/267/270/271 board IC101/151 (CCD imager) | SE-104/112/114 board SE201/202 (PITCH, YAW sensor) | VF-129 board IC901 (*1) (CRT driver) | VF-129 board T901 (*1) (FBT) | VF-141 board IC4501 (*2) (RGB driver) | VF-141 board IC4502 (*2) (Timing generator) | LB-62 board ND4601 (*2) (Back light) | PD-117/118 board IC5501 (RGB driver) | PD-117/118 board IC5502 (Timing generator) | VC-235 board IC1502 (S/H, AGC, A/D CONV.) | VC-235 board IC3103 (REC/PB AMP) | VC-235 board IC3101 (EQ, A/D CONV., PLL) | VC-235 board IC1501 (Timing generator) | VC-235 board IC3701 (VIDEO IN/OUT) | VC-235 board IC3301 (VIDEO DSP, D/A CONV.) | VC-235 board IC2201 (Y/C process) | MI-37 board IC3901 (IR transmitter) | VC-235 board IC5701 (AUDIO IN/OUT) | PC-77 board IC105 (Digital still control) |
| Initialization of 7, 8, C, D, E, F page data and Modification of B page | Initialization of 8, C, D page data | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Initialization of 7, E, F page data | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Modification of B page data | | | | | | | | | | | | | | | | | | | | | | | | | | | ● |
| Camera | HALL adj. | ● | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Flange back adj. | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| | Optical axis adj. | ● | | | | | | | ● | | | | | | | | | | | | | | | | | | | |
| | Color reproduction adj. | | | | | | | | ● | | | | | | | | | | ● | | | | | | | | | |
| | AWB & LV standard data input | | | | | | | | ● | | | | | | | | | | ● | | | | | | | | | |
| | Auto white balance adj. | | | | | | | | ● | | | | | | | | | | ● | | | | | | | | | |
| | Angular velocity sensor sensitivity preset | | | | | | | | | ● | | | | | | | | | | | | | | | | | | |
| B/W CRT EVF (*1) | Centering adj. | | ● | | | | | | | | ● | ● | | | | | | | | | | | | | | | | |
| | Focus adj. | | ● | | | | | | | | ● | ● | | | | | | | | | | | | | | | | |
| | Aberration adj. | | ● | | | | | | | | ● | ● | | | | | | | | | | | | | | | | |
| | Horizontal amplitude adj. | | ● | | | | | | | | ● | ● | | | | | | | | | | | | | | | | |
| | Vertical amplitude adj. | | ● | | | | | | | | ● | ● | | | | | | | | | | | | | | | | |
| | Brightness adj. | | ● | | | | | | | | ● | ● | | | | | | | | | | | | | | | | |
| LCD EVF (*2) | EVF initial data input | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | VCO adj. | | | | | | | | | | | | ● | ● | | | | | | | | | | | | | | |
| | RGB AMP adj. | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| | Contrast adj. | | | | | | | | | | | | ● | | | | | | | | | | | | | | | |
| | Backlight consumption current adj. | | | | | | | | | | | | | | ● | | | | | | | | | ● | | | | |
| | White balance adj. (*3) | | | ● | | | | | | | | | ● | | ● | | | | | | | | | ● | | | | |
| LCD | LCD initial data input | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | VCO adj. | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| | RGB AMP adj. | | | | | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| | Contrast adj. | | | | | | | | | | | | | | | ● | ● | | | | | | | ● | | | | |
| | COM AMP adj. | | | | | | | | | | | | | | | ● | ● | | | | | | | ● | | | | |
| | V-COM adj. | | | | ● | | | | | | | | | | | ● | ● | | | | | | | | | | | |
| | White balance adj. | | | | ● | ● | | | | | | | | | | ● | ● | | | | | | | ● | | | | |
| System control | Node unique ID No. input | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Battery end adj. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Servo, RF | Reel FG adj. | | ● | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Switching position adj. | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| | AGC center level adj. | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | |
| | APC & AEQ adj. | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | |
| | PLL f ₀ & LPF f ₀ adj. | | | | | | | | | | | | | | | | | | ● | ● | | | | | | | | |
| | Hi8/Standard8 switching position adj. | | ● | | | | | ● | | | | | | | | | | | | | | | | | | | | |
| | CAP FG duty adj. | | ● | | | | | ● | | | | | | | | | | | | </ | | | | | | | | |

Table 5-1-1(1)

• **Adjusting items when replacing a board or EEPROM**

When replacing a board or EEPROM, adjust the items indicated by ● in the following table.

| Adjustment Section | Adjustment | Replaced part | | | | | | | | | |
|---|--|------------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|---------------------------|---------------------------|----------------------------|-----------------------------------|-----------------------------------|
| | | Board replacement | | | | | | | | | |
| | | (COMPLETE) SE-104/112/114 board | (COMPLETE) VF-129 board (*1) | (COMPLETE) VF-141 board (*2) | (COMPLETE) LB-62 board (*2) | (COMPLETE) PD-117/118 board | (COMPLETE) MI-37 board | (COMPLETE) PC-77 board | (COMPLETE) VC-235 board | (EEP ROM) VC-235 board IC-4502 | (EEP ROM) VC-235 board IC-4901 |
| Initialization of 7, 8, C, D, E, F page data and Modification of B page | Initialization of 8, C, D page data | | | | | | | | | ● | |
| | Initialization of 7, E, F page data | | | | | | | | | | ● |
| | Modification of B page data | | | | | | | ● | | | |
| Camera | HALL adj. | | | | | | | | ● | | ● |
| | Flange back adj. | | | | | | | | ● | | ● |
| | Optical axis adj. | | | | | | | | ● | | ● |
| | Color reproduction adj. | | | | | | | | ● | | ● |
| | AWB & LV standard data input | | | | | | | | ● | | ● |
| | Auto white balance adj. | | | | | | | | ● | | ● |
| | Angular velocity sensor sensitivity preset | ● | | | | | | | ● | | ● |
| B/W CRT EVF (*1) | Centering adj. | ● | | | | | | | | | |
| | Focus adj. | ● | | | | | | | | | |
| | Aberration adj. | ● | | | | | | | | | |
| | Horizontal amplitude adj. | ● | | | | | | | | | |
| | Vertical amplitude adj. | ● | | | | | | | | | |
| | Brightness adj. | ● | | | | | | | | | |
| LCD EVF (*2) | EVF initial data input | | | | | | | | ● | ● | |
| | VCO adj. | | ● | | | | | | ● | ● | |
| | RGB AMP adj. | | ● | | | | | | ● | ● | |
| | Contrast adj. | | ● | | | | | | ● | ● | |
| | Backlight consumption current adj. | | | ● | | | | | ● | ● | |
| | White balance adj. (*3) | | ● | ● | | | | | ● | ● | |
| LCD | LCD initial data input | | | | | | | | ● | ● | |
| | VCO adj. | | | | | ● | | | ● | ● | |
| | RGB AMP adj. | | | | | ● | | | ● | ● | |
| | Contrast adj. | | | | | ● | | | ● | ● | |
| | COM AMP adj. | | | | | ● | | | ● | ● | |
| | V-COM adj. | | | | | ● | | | ● | ● | |
| | White balance adj. | | | | | ● | | | ● | ● | |
| System control | Node unique ID No. input | | | | | | | | ● | ● | |
| | Battery end adj. | | | | | | | | ● | ● | |
| Servo, RF | Reel FG adj. | | | | | | | | ● | ● | |
| | Switching position adj. | | | | | | | | ● | ● | |
| | AGC center level adj. | | | | | | | | | ● | |
| | APC & AEQ adj. | | | | | | | | | ● | |
| | PLL f ₀ & LPF f ₀ adj. | | | | | | | | | ● | |
| | Hi8/Standard8 switching position adj. | | | | | | | | ● | ● | |
| | CAP FG duty adj. | | | | | | | | ● | ● | |
| Video | 27MHz/36MHz origin oscillation adj. | | | | | | | | | | ● |
| | Chroma BPF f ₀ adj. | | | | | | | | | ● | |
| | S VIDEO OUT Y level adj. | | | | | | | | | ● | |
| | S VIDEO OUT chroma level adj. | | | | | | | | | ● | |
| | Hi8/Standard8 AFC f ₀ adj. | | | | | | | | | | ● |
| IR | IR video carrier frequency adj. | | | | | | ● | | ● | ● | |
| | IR video deviation adj. | | | | | | ● | | ● | ● | |
| | IR audio deviation adj. | | | | | | ● | | ● | ● | |
| Audio | Hi8/Standard8 AFM BPF f ₀ adj. | | | | | | | | | | ● |
| | Hi8/Standard8 AFM 1.5MHz deviation adj. | | | | | | | | | | ● |
| | Hi8/Standard8 AFM 1.7MHz deviation adj. | | | | | | | | | | ● |
| Mechanism | Tape path adj. | | | | | | | | | | |

Note 1:

*1: CRT EVF model only

(DCR-TRV320/TRV320E: E, HK, AUS, CN)
(DCR-TRV320P/TRV420E: CN)
(DCR-TRV520/TRV520E: E, HK, AUS, CN, JE)
(DCR-TRV520P)

*2: LCD EVF model only

(DCR-TRV320E: AEP, UK, EE, NE, RU)
(DCR-TRV420E: AEP)
(DCR-TRV520E: AEP)
(DCR-TRV525/TRV620E/TRV720/TRV720E)

*3: COLOR LCD EVF model only

(DCR-TRV525/TRV620E/TRV720/TRV720E)

Note 2:

2.5 LCD model: DCR-TRV320/TRV320E/
TRV320P

3 LCD model: DCR-TRV420E/TRV525

3.5 LCD model: DCR-TRV520/TRV520E/
TRV520P/TRV620E

4 LCD model: DCR-TRV720/TRV720E

| | SE board | PD board |
|-----------------|----------|----------|
| 2.5 LCD model | SE-104 | PD-117 |
| 3/3.5 LCD model | SE-112 | PD-118 |
| 4 LCD model | SE-114 | PD-118 |

Note 3:

720H model: DCR-TRV320/TRV320P/
TRV520/TRV520P/TRV525/
TRV720

960H model: DCR-TRV320E/TRV420E/
TRV520E/TRV620E/TRV720E

| | | CD board |
|------------|-----------------|----------|
| 720H model | 2.5 LCD model | CD-242 |
| | 3/3.5 LCD model | CD-266 |
| | 4 LCD model | CD-270 |
| 960H model | 2.5 LCD model | CD-244 |
| | 3/3.5 LCD model | CD-267 |
| | 4 LCD model | CD-271 |

Table 5-1-1(2)

5-1. CAMERA SECTION ADJUSTMENT

1-1. PREPARATIONS BEFORE ADJUSTMENT (CAMERA SECTION)

1-1-1. List of Service Tools

- Oscilloscope
- Color monitor
- Vectorscope
- Regulated power supply
- Digital voltmeter
- Frequency counter

| Ref. No. | Name | Parts Code | Usage |
|----------|---|--------------|--|
| J-1 | Filter for color temperature correction (C14) | J-6080-058-A | Auto white balance adjustment/check White balance adjustment/check |
| J-2 | ND filter 1.0 | J-6080-808-A | White balance check |
| | ND filter 0.4 | J-6080-806-A | White balance check |
| | ND filter 0.1 | J-6080-807-A | White balance check |
| J-3 | Pattern box PTB-450 | J-6082-200-A | |
| J-4 | Color chart for pattern box | J-6020-250-A | |
| J-5 | Adjustment remote commander (RM-95 upgraded). (Note 1) | J-6082-053-B | |
| J-6 | Siemens star chart | J-6080-875-A | For checking the flange back |
| J-7 | Clear chart for pattern box | J-6080-621-A | |
| J-8 | Multi CPC jig | J-6082-311-A | For adjusting the LCD block |
| J-9 | CPC-13 jig | J-6082-443-A | For adjusting the video section |
| J-10 | Power cord (Note 2) | J-6082-223-A | For connecting the battery terminal and DC power supply |
| J-11 | Extension cable (16P, 0.5 mm) | J-6082-357-A | For extension between the CD-242/266/270 board (CN101) and the VC-235 board (CN1501)(720H model) For extension between the CD-244/267/271 board (CN151) and the VC-235 board (CN1501)(960H model) |
| J-12 | Extension cable (100P, 0.5 mm) | J-6082-352-A | For extension between the PC-77 board (CN802) and the VC-235 board (CN1104) |
| J-13 | IR receiver jig | J-6082-383-A | For adjusting the IR transmitter |
| J-14 | Mini pattern box | J-6082-353-B | For adjusting the flange back |
| J-15 | Camera table | J-6082-384-A | For adjusting the flange back |

Note 1: If the micro processor IC in the adjustment remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched. In this case, replace with the new micro processor (8-759-148-35).

Note 2: Connect the adjustment remote commander to the LANC jack, and set to HOLD switch to the "ADJ" side.

Note 3: 720H model: DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720
960H model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

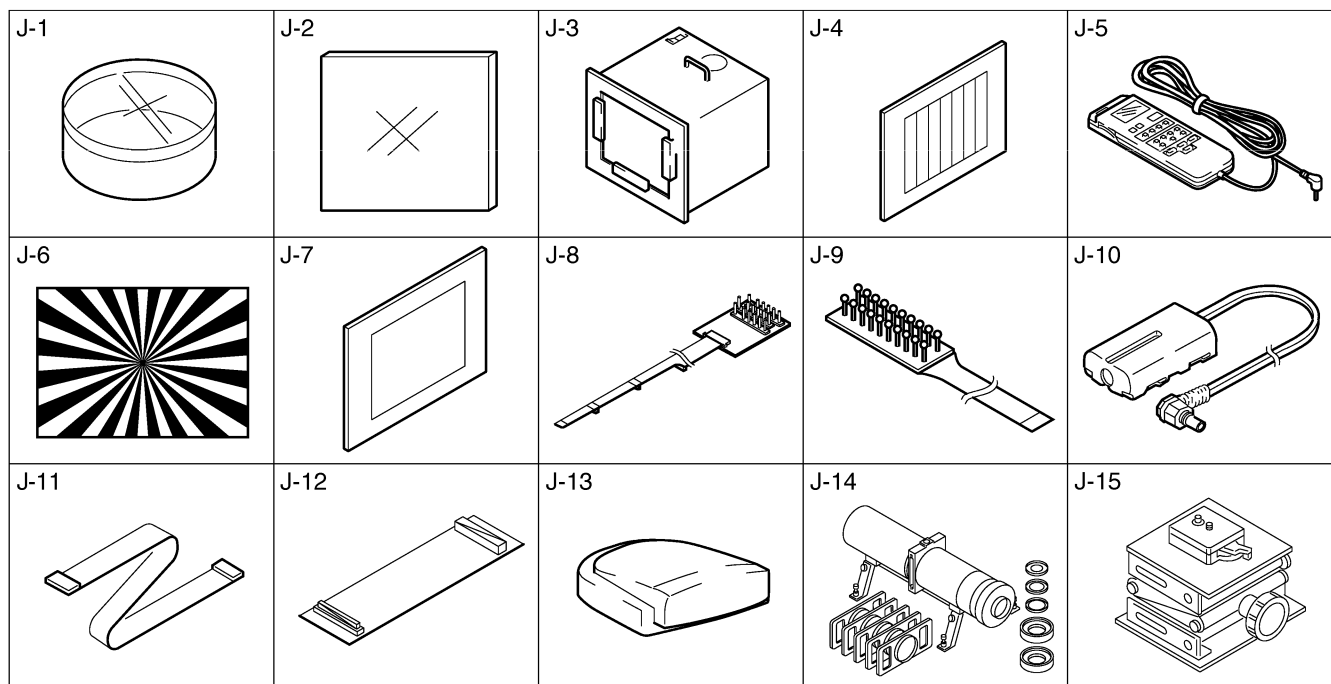


Fig. 5-1-1

1-1-2. Preparations

Note 1: For details of how remove the cabinet and boards, refer to “2. DISASSEMBLY”.

Note 2: When performing only the adjustments, the lens block and boards need not be disassembled.

Note 3: 2.5 LCD model: DCR-TRV320/TRV320E/TRV320P

3 LCD model: DCR-TRV420E/TRV525

3.5 LCD model: DCR-TRV520/TRV520E/TRV520P/
TRV620E

4 LCD model: DCR-TRV720/TRV720E

| | CF board |
|-----------------|----------|
| 2.5 LCD model | CF-69 |
| 3/3.5 LCD model | CF-70 |
| 4 LCD model | CF-72 |

- 1) Connect the equipment for adjustments according to Fig. 5-1-3, 4.
- 2) The front panel block (MI-37 board, focus dial, microphone unit) must be assembled because the focus ring is used for adjustments.

Note 4: As removing the cabinet (R) (removing the VC-235 board CN1105) means removing the lithium 3V power supply (CF-69/70/72 board BH001), data such as date, time, user-set menus will be lost. After completing adjustments, reset these data. If the cabinet (R) has been removed, the self-diagnosis data, data on history of use (total drum rotation time, etc.) will be lost. Before removing, note down the self-diagnosis data and data on history use (data of page: 2, address: A2 to AA). (Refer to “SELF-DIAGNOSIS FUNCTION” for the self-diagnosis data, and to “5-4. Service Mode” for the data on the history use.)

Note 5: Setting the “Forced Camera Power ON” Mode

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 01, and press the PAUSE button of the adjustment remote commander.
The above procedure will enable the camera power to be turned on with the power switch (SS-10000 block) removed. After completing adjustments, be sure to exit the “Forced Camera Power ON Mode”.

Note 6: Exiting the “Forced Camera Power ON” Mode

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 0, address: 01, and set data: 00.

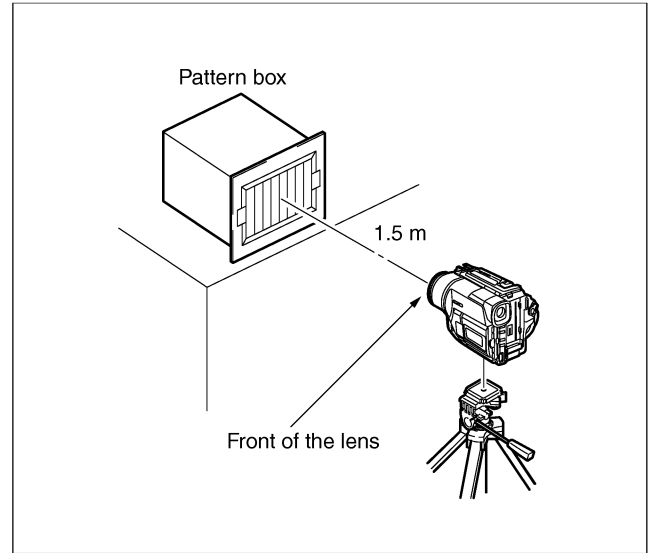


Fig. 5-1-2

2.5 LCD model

Note 1: Press the battery switch of the battery terminal using adhesive tape, etc.

Note 2: 720H model: DCR-TRV320/TRV320P

960H model: DCR-TRV320E

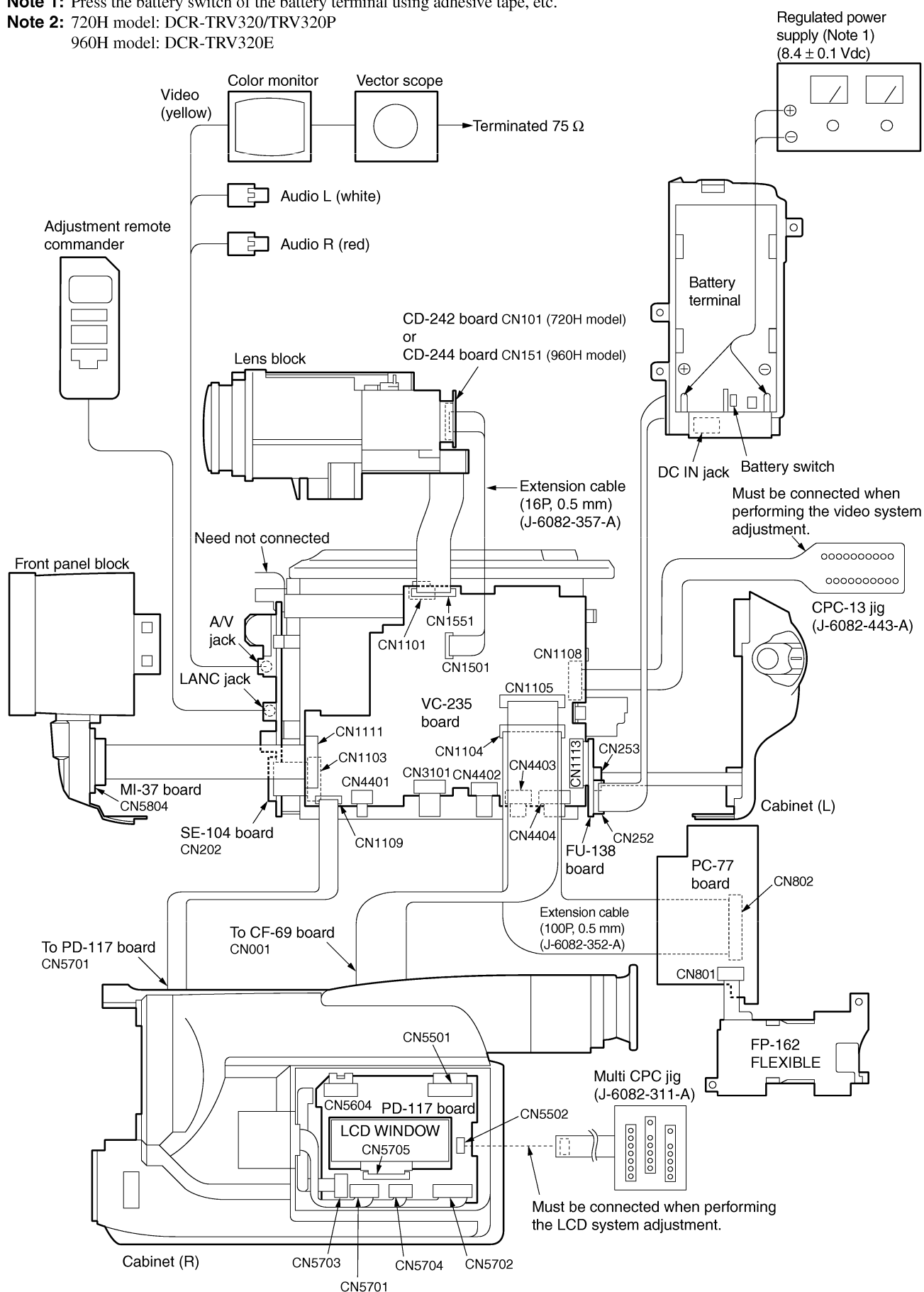


Fig. 5-1-3

3/3.5 LCD model

Note 1: Press the battery switch of the battery terminal using adhesive tape, etc.

Note 2: 720H model: DCR-TRV520/TRV520P/TRV525

960H model: DCR-TR420E/TRV520E/TRV620E

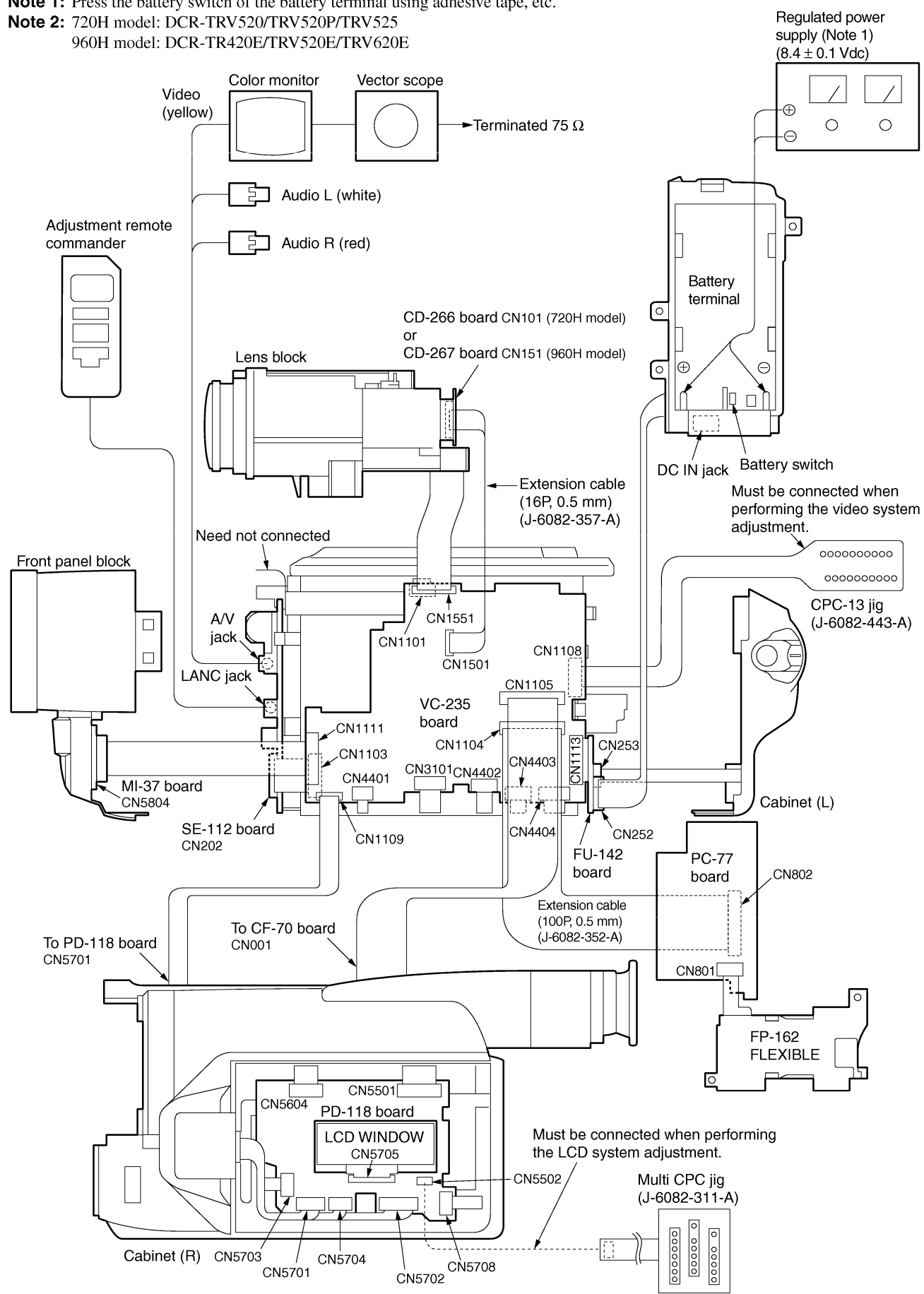


Fig. 5-1-4

4 LCD model

Note 1: Press the battery switch of the battery terminal using adhesive tape, etc.

Note 2: 720H model: DCR-TRV720

960H model: DCR-TR720E

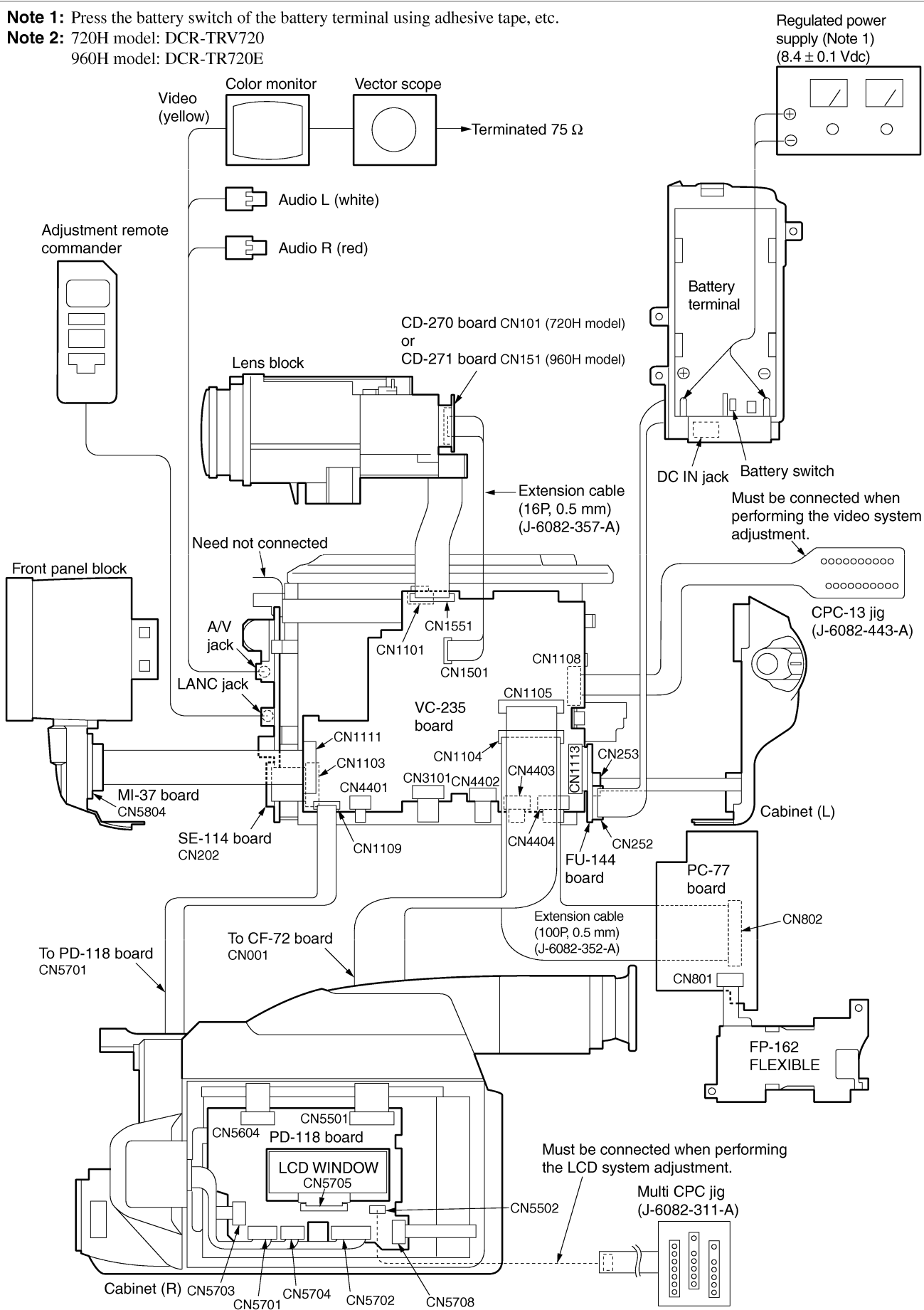


Fig. 5-1-5

1-1-3. Precaution

1. Setting the Switch

Unless otherwise specified, set the switches as follows and perform adjustments without loading cassette.

- | | | | |
|---|-----------|---|--------|
| 1. POWER switch (SS-10000 block) | CAMERA | 8. FOCUS switch (MF-10000) | MANUAL |
| 2. NIGHT SHOT switch (Lens block) | OFF | 9. PROGRAM AE (CF-69/70, KP-009 board) | Auto |
| 3. DEMO MODE (Menu display) | OFF | 10. BACK LIGHT (CF-69/70, KP-009 board) | OFF |
| 4. DIGITAL ZOOM (Menu display) | OFF | 11. PICTURE EFFECT (CF69/70/72 board) | OFF |
| 5. STEADY SHOT (Menu display) | OFF | 12. DIGITAL EFFECT (CF-69/70/72 board) | OFF |
| 6. DISPLAY (Menu display) | V-OUT/LCD | 13. 16 : 9 WIDE (MENU display) | OFF |
| 7. DISPLAY (CF-69/70/72 board) | ON | | |

2. Order of Adjustments

Basically carry out adjustments in the order given.

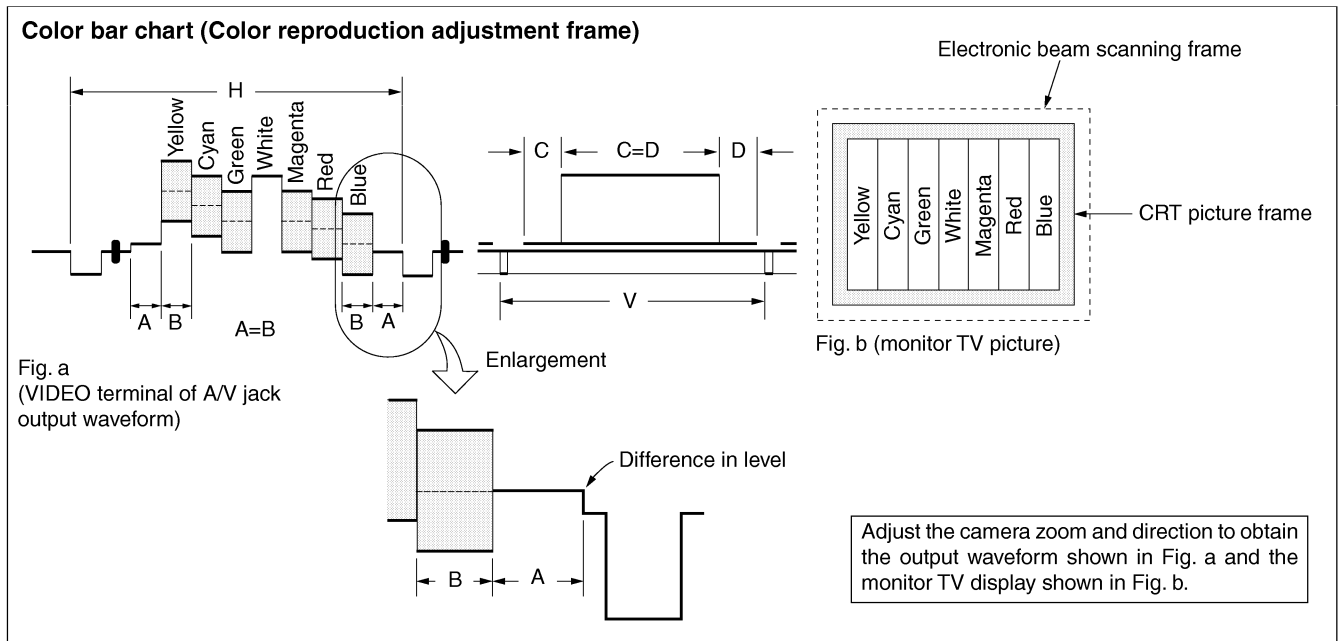


Fig. 5-1-6

3. Subjects

- 1) Color bar chart (Color reproduction adjustment frame)
When performing adjustments using the color bar chart, adjust the picture frame as shown in Fig. 5-1-6. (Color reproduction adjustment frame)
- 2) Clear chart (Color reproduction adjustment frame)
Remove the color bar chart from the pattern box and insert a clear chart in its place. (Do not perform zoom operations during this time)
- 3) Chart for flange back adjustment
Join together a piece of white A0 size paper (1189mm × 841 mm) and a piece of black paper to make the chart shown in Fig. 5-1-7.

Note: Use a non-reflecting and non-glazing vellum paper. The size must be A0 or larger and the joint between the white and black paper must not have any undulations.

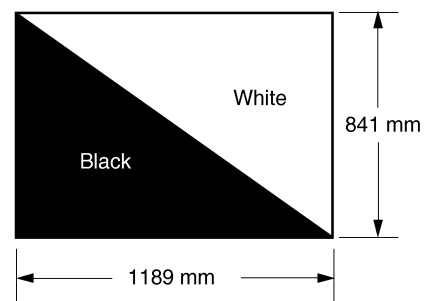


Fig. 5-1-7

1-2. INITIALIZATION OF 7, 8, C, D, E, F PAGE DATA AND MODIFICATION OF B PAGE DATA

1-2-1. INITIALIZATION OF 8, C, D PAGE DATA

1. Initializing the 8, C, D Page Data

Note 1: If “Initialization of Pages 8, C, D” is executed, all data on pages 8, C and D are initialized. (Only an individual page cannot be initialized)

Note 2: If the 8, C, D page data has been initialized, “Modification of 8, C, D Page Data” and following adjustments need to be performed again.

- 1) LCD electronic viewfinder system adjustment
- 2) LCD system adjustment
- 3) System control system adjustment
- 4) Servo and RF system adjustment
- 5) “Chroma BPF f₀ adjustment”, “S VIDEO OUT Y level adjustment” and “S VIDEO OUT chroma level adjustment” of the video system adjustments.

| | |
|-------------------|----------|
| Adjusting Page | 8 |
| Adjusting Address | 00 to FF |
| Adjusting Page | C |
| Adjusting Address | 10 to FF |
| Adjusting Page | D |
| Adjusting Address | 10 to FF |

Initializing Method:

- 1) Select page: 0, address: 01, and set data: 80.
- 2) Select page: 3, address: 81, set data: 10, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 3, address: 80, set data: 0A, and press the PAUSE button of the adjustment remote commander.
- 4) Select page: 3, address: 80, and check that the data changes to “1A”.
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Perform “Modification of 8, C, D Page Data”.

2. Modification of 8, C, D Page Data

If the 8, C, D page data has been initialized, change the data of the “Fixed data-2” address shown in the following table by manual input.

Modifying Method:

- 1) Before changing the data, select page: 0, address: 01, and set data: 01.
- 2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
Note : If copy the data built in the different model, the camcorder may not operate.
- 3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
- 4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of D Page data

- 1) Select page: 2, address: 00, and set data: 29.
- 2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 0, address: 01, and set data: 00.

3. 8 Page Table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 8, C, D Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modification of 8, C, D Page Data”)

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| 00 to 98 | | | Fixed data-1 (Initialized data) |
| 99 | | | Fixed data-2 |
| 9A to A2 | | | Fixed data-1 (Initialized data) |
| A3 | | | Fixed data-2 |
| A4 to A6 | | | Fixed data-1 (Initialized data) |
| A7 | | | Fixed data-2 |
| A8 | | | |
| A9 to FF | | | Fixed data-1 (Initialized data) |

4. C Page Table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 8, C, D Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modification of 8, C, D Page Data”)

| Address | Initial value | | Remark |
|----------|---------------|-----|--|
| | NTSC | PAL | |
| 00 to 0F | | | |
| 10 | EE | EE | Switching position adj. |
| 11 | 00 | 00 | |
| 12 | 00 | 00 | |
| 13 | 00 | 00 | |
| 14 to 16 | | | Fixed data-1 (Initialized data) |
| 17 | E0 | E0 | Reel FG adj. |
| 18 | 25 | 25 | APC & AEQ adj. |
| 19 | 25 | 25 | |
| 1A | | | Fixed data-1 (Initialized data) |
| 1B | 25 | 25 | APC & AEQ adj. |
| 1C | 25 | 25 | |
| 1D | | | Fixed data-1 (Initialized data) |
| 1E | 25 | 25 | AGC center level adj. |
| 1F | 3E | 3E | PLL f ₀ & LPF f ₀ adj. |
| 20 | 3E | 3E | |
| 21 | CA | CA | APC & AEQ adj. |
| 22 | 99 | 99 | PLL f ₀ & LPF f ₀ adj. |
| 23, 24 | | | Fixed data-1 (Initialized data) |
| 25 | 88 | 88 | S VIDEO OUT Y level adj. |
| 26 | E3 | E3 | S VIDEO OUT chroma level adj. |
| 27 | A1 | A1 | |
| 28 | 04 | 04 | Chroma BPF f ₀ adj. |
| 29 | 20 | 20 | PLL f ₀ & LPF f ₀ adj. |
| 2A, 2B | | | Fixed data-1 (Initialized data) |
| 2C | 03 | 03 | APC & AEQ adj. |
| 2D, 2E | | | Fixed data-1 (Initialized data) |
| 2F | | | Fixed data-2 |
| 30 | E0 | E0 | Reel FG adj. |
| 31 to 41 | | | Fixed data-1 (Initialized data) |
| 42 | | | Fixed data-2 |
| 43 to 83 | | | Fixed data-1 (Initialized data) |
| 84 | | | Fixed data-2 |
| 85 | | | Fixed data-1 (Initialized data) |
| 86 | | | Fixed data-2 |
| 87, 88 | | | Fixed data-1 (Initialized data) |
| 89 | | | Fixed data-2 |
| 8A to 91 | | | Fixed data-1 (Initialized data) |
| 92 | | | Fixed data-2 |
| 93 to 99 | | | Fixed data-1 (Initialized data) |
| 9A | | | Fixed data-2 |
| 9B to A4 | | | Fixed data-1 (Initialized data) |
| A5 | | | Fixed data-2 |
| A6 | | | |
| A7 to D5 | | | Fixed data-1 (Initialized data) |

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| D6 | | | Fixed data-2 |
| D7 | | | |
| D8 | | | |
| D9 | | | |
| DA | | | |
| DB | | | |
| DC | | | |
| DD | | | |
| DE | | | |
| DF | | | |
| E0 | | | |
| E1 to E5 | | | Fixed data-1 (Initialized data) |
| E6 | | | Fixed data-2 |
| E7 | | | Fixed data-1 (Initialized data) |
| E8 | 08 | 08 | Node unique ID No. input |
| E9 | 00 | 00 | |
| EA | 46 | 46 | |
| EB | 01 | 01 | |
| EC | 01 | 01 | |
| ED | 00 | 00 | |
| EE | 00 | 00 | |
| EF | 00 | 00 | |
| F0 to F3 | | | Fixed data-1 (Initialized data) |
| F4 | 00 | 00 | Emergency memory address |
| F5 | 00 | 00 | |
| F6 | 00 | 00 | |
| F7 | 00 | 00 | |
| F8 | 00 | 00 | |
| F9 | 00 | 00 | |
| FA | 00 | 00 | |
| FB | 00 | 00 | |
| FC | 00 | 00 | |
| FD | 00 | 00 | |
| FE | 00 | 00 | |
| FF | 00 | 00 | |

5. D Page Table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 8, C, D Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modification of 8, C, D Page Data”)

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| 00 to 0F | | | |
| 10 | 00 | 00 | Test mode |
| 11, 12 | | | Fixed data-1 (Initialized data) |
| 13 | | | Fixed data-2 |
| 14 | | | |
| 15 to 1A | | | Fixed data-1 (Initialized data) |
| 1B | | | Fixed data-2 |
| 1C | | | Fixed data-1 (Initialized data) |
| 1D | | | Fixed data-2 |
| 1E | | | |
| 1F | | | |
| 20 to 26 | | | Fixed data-1 (Initialized data) |
| 27 | | | Fixed data-2 |
| 28 | | | |
| 29 to 2B | | | Fixed data-1 (Initialized data) |
| 2C | | | Fixed data-2 |
| 2D to 2F | | | Fixed data-1 (Initialized data) |
| 30 | | | Fixed data-2 |
| 31 to 42 | | | Fixed data-1 (Initialized data) |
| 43 | | | Fixed data-2 |
| 44 | | | |
| 45 | | | |
| 46, 47 | | | Fixed data-1 (Initialized data) |
| 48 | 90 | 90 | Battery end adj. |
| 49 | 98 | 98 | |
| 4A to 4C | | | Fixed data-1 (Initialized data) |
| 4D | | | Fixed data-2 |
| 4E to 50 | | | Fixed data-1 (Initialized data) |
| 51 | | | Fixed data-2 |
| 52 | | | Fixed data-1 (Initialized data) |
| 53 | | | Fixed data-2 |
| 54 to 59 | | | Fixed data-1 (Initialized data) |
| 5A | | | Fixed data-2 |
| 5B | | | |
| 5C | | | |
| 5D to 65 | | | Fixed data-1 (Initialized data) |
| 66 | | | Fixed data-2 |
| 67 | | | |
| 68 | | | |
| 69 | | | |
| 6A to 83 | | | Fixed data-1 (Initialized data) |
| 84 | | | Fixed data-2 |
| 85, 86 | | | Fixed data-1 (Initialized data) |
| 87 | | | Fixed data-2 |
| 88 to 8D | | | Fixed data-1 (Initialized data) |
| 8E | | | Fixed data-2 |
| 8F | | | |

| Address | Initial value | | Remark |
|----------|---------------|-------|--|
| | NTSC | PAL | |
| 90, 91 | | | Fixed data-1 (Initialized data) |
| 92 | 80 | 80 | VCO adj. (LCD EVF) |
| 93 | – | 70 | Fixed data-1 (NTSC model) / VCO adj. (LCD EVF) (PAL model) |
| 94 | | | Fixed data-1 (Initialized data) |
| 95 | A0 | A0 | RGB AMP adj. (LCD EVF) |
| 96 | | | Fixed data-1 (Initialized data) |
| 97 | 80 | 80 | White balance adj. (LCD EVF) |
| 98 | 80 | 80 | |
| 99 | 30 | 30 | Contrast adj. (LCD EVF) |
| 9A, 9B | | | Fixed data-1 (Initialized data) |
| 9C | D0 | D0 | Backlight consumption current adj. (LCD EVF) |
| 9D | 10 | 10 | |
| 9E | 10 | 10 | |
| 9F to A1 | | | Fixed data-1 (Initialized data) |
| A2 | 80 | 80 | VCO adj. (LCD) |
| A3 | – | 70 | Fixed data-1 (NTSC model) / VCO adj. (LCD) (PAL model) |
| A4 | 80 | 80 | V-COM adj. (LCD) |
| A5 | 30/20 | 30/20 | RGB AMP adj. (LCD) (Note 3) |
| A6 | | | Fixed data-1 (Initialized data) |
| A7 | C0/80 | C0/80 | COM AMP adj. (LCD) (Note 3) |
| A8 | 80 | 80 | White balance adj. (LCD) |
| A9 | 80 | 80 | |
| AA | 50/30 | 50/30 | Contrast adj. (LCD) (Note 3) |
| AB | | | Fixed data-1 (Initialized data) |
| AC | | | Fixed data-2 |
| AD | | | |
| AE to B3 | | | Fixed data-1 (Initialized data) |
| B4 | | | Fixed data-2 |
| B5 | | | |
| B6 | | | |
| B7, B8 | | | Fixed data-1 (Initialized data) |
| B9 | | | Fixed data-2 |
| BA | | | |
| BB to C3 | | | Fixed data-1 (Initialized data) |
| C4 | | | Fixed data-2 |
| C5 | | | Fixed data-1 (Initialized data) |
| C6 | | | Fixed data-2 |
| C7 to CF | | | Fixed data-1 (Initialized data) |
| D0 | | | Fixed data-2 |
| D1 | | | |
| D2, D3 | | | Fixed data-1 (Initialized data) |
| D4 | | | Fixed data-2 |
| D5 | | | |
| D6 | | | |
| D7 | | | |
| D8 to FF | | | Fixed data-1 (Initialized data) |

Note 3: LCD TYPE S/LCD TYPE C

1-2-2. INITIALIZATION OF 7, E, F PAGE DATA

1. Initializing the 7, E, F Page Data

Note 1: If “Initialization of Pages 7, E, F” is executed, all data on pages 7, E and F are initialized. (Only an individual page cannot be initialized)

Note 2: If the 7, E, F page data has been initialized, “Modification of 7, E, F Page Data” and following adjustments need to be performed again.

- 1) Camera system adjustments
- 2) “Hi8/standard 8 mm switching position adjustment” and “CAP FG duty adjustment” of the servo & RF system adjustments
- 3) “27 MHz/36 MHz origin oscillation adjustment” and “Hi8/standard 8 mm AFC f₀ adjustment” of the video system adjustment
- 4) IR transmitter adjustments
- 5) Audio system adjustments

| | |
|-------------------|----------|
| Adjusting Page | 7 |
| Adjusting Address | 00 to FF |
| Adjusting Page | E |
| Adjusting Address | 00 to FF |
| Adjusting Page | F |
| Adjusting Address | 10 to FF |

Initializing Method:

- 1) Select page: 0, address: 01, and set data: 80.
- 2) Select page: 6, address: 00, and set data: 55 (NTSC) or data: 51 (PAL).
- 3) Select page: 6, address: 01, set data: 55 (NTSC) or data: 51 (PAL), and press the PAUSE button of the adjustment remote commander.
- 4) Select page: 6, address: 02, and check that the data is “01”.
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Perform “Modification of 7, E, F Page Data”.

2. Modification of 7, E, F Page Data

If the 7, E, F page data has been initialized, change the data of the “Fixed data-2” address shown in the following tables by manual input.

Modifying Method:

- 1) Before changing the data, select page: 0, address: 01, and set data: 01.
- 2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
Note : If copy the data built in the different model, the camcorder may not operate.
- 3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
- 4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of 7, E, F Page data

- 1) Select page: 2, address: 00, and set data: 29.
- 2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 0, address: 01, and set data: 00.

3. 7 Page Table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 7, E, F Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modification of 7, E, F Page Data”)

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| 00 to 05 | | | Fixed data-1 (Initialized data) |
| 06 | | | Fixed data-2 |
| 07 | | | |
| 08 to FF | | | Fixed data-1 (Initialized data) |

4. E Page Table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 7, E, F Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modification of 7, E, F Page Data”)

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| 00, 01 | | | Fixed data-1 (Initialized data) |
| 02 | | | Fixed data-2 |
| 03 | | | |
| 04 | | | |
| 05 | | | |
| 06, 07 | | | Fixed data-1 (Initialized data) |
| 08 | | | Fixed data-2 |
| 09 to 0D | | | Fixed data-1 (Initialized data) |
| 0E | | | Fixed data-2 |
| 0F | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 1A to 27 | | | Fixed data-1 (Initialized data) |
| 28 | | | Fixed data-2 |
| 29 to 33 | | | Fixed data-1 (Initialized data) |
| 34 | | | Fixed data-2 |
| 35 | | | Fixed data-1 (Initialized data) |
| 36 | | | Fixed data-2 |
| 37 | | | Fixed data-1 (Initialized data) |
| 38 | | | Fixed data-2 |
| 39 | | | |
| 3A to 3C | | | Fixed data-1 (Initialized data) |
| 3D | | | Fixed data-2 |
| 3E to 42 | | | Fixed data-1 (Initialized data) |
| 43 | | | Fixed data-2 |
| 44, 45 | | | Fixed data-1 (Initialized data) |
| 46 | | | Fixed data-2 |
| 47 | | | |
| 48 | | | |
| 49 to 50 | | | Fixed data-1 (Initialized data) |
| 51 | | | Fixed data-2 |
| 52 to 56 | | | Fixed data-1 (Initialized data) |
| 57 | | | Fixed data-2 |
| 58 to 5B | | | Fixed data-1 (Initialized data) |
| 5C | | | Fixed data-2 |
| 5D | | | |
| 5E | | | |
| 5F to 71 | | | Fixed data-1 (Initialized data) |
| 72 | | | Fixed data-2 |
| 73 to 7B | | | Fixed data-1 (Initialized data) |
| 7C | | | Fixed data-2 |
| 7D | | | |
| 7E | | | |

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| 7F | | | Fixed data-1 (Initialized data) |
| 80 | | | Fixed data-2 |
| 81 | | | |
| 82 to 8B | | | Fixed data-1 (Initialized data) |
| 8C | | | Fixed data-2 |
| 8D | | | |
| 8E | | | |
| 8F | | | Fixed data-1 (Initialized data) |
| 90 | | | Fixed data-2 |
| 91 to 93 | | | Fixed data-1 (Initialized data) |
| 94 | | | Fixed data-2 |
| 95 to FF | | | Fixed data-1 (Initialized data) |

5. F Page Table

Note 1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 7, E, F Page Data”)

Note 2: Fixed data-2: Modified data. (Refer to “2. Modification of 7, E, F Page Data”)

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------------|
| | NTSC | PAL | |
| 00 to 0F | | | |
| 10 | 00 | 00 | Emergency memory address |
| 11 | 00 | 00 | |
| 12 | 00 | 00 | |
| 13 | 00 | 00 | |
| 14 | 00 | 00 | |
| 15 | 00 | 00 | |
| 16 | 00 | 00 | |
| 17 | 00 | 00 | |
| 18 | 00 | 00 | |
| 19 | 00 | 00 | |
| 1A | 00 | 00 | |
| 1B | 00 | 00 | |
| 1C | | | Fixed data-2 |
| 1D to 23 | | | Fixed data-1 (Initialized data) |
| 24 | | | Fixed data-2 |
| 25 | | | Fixed data-1 (Initialized data) |
| 26 | | | Fixed data-2 |
| 27 to 2B | | | Fixed data-1 (Initialized data) |
| 2C | | | Fixed data-2 |
| 2D | | | Fixed data-1 (Initialized data) |
| 2E | | | Fixed data-2 |
| 2F to 32 | | | Fixed data-1 (Initialized data) |
| 33 | | | Fixed data-2 |
| 34 to 37 | | | Fixed data-1 (Initialized data) |
| 38 | 68 | 68 | HALL adj. |
| 39 | 80 | 80 | |
| 3A | 8D | 8D | |
| 3B | | | Fixed data-2 |
| 3C | 80 | 80 | AWB & LV standard data input |
| 3D | 7A | 7A | |
| 3E | 2B | 2B | |
| 3F | 80 | 80 | |
| 40 | 65 | 65 | |
| 41 | 80 | 80 | |
| 42 | 8D | 8D | |
| 43 | 87 | 87 | Auto white balance adj. |
| 44 to 46 | | | Fixed data-1 (Initialized data) |
| 47 | 33 | 33 | Color reproduction adj. |
| 48 | | | Fixed data-1 (Initialized data) |
| 49 | 34 | 34 | Color reproduction adj. |
| 4A to 4C | | | Fixed data-1 (Initialized data) |
| 4D | 8C | 8C | 27 MHz/36 MHz origin oscillation adj. |
| 4E | 2E | 2E | Flange back adj. |
| 4F | 12 | 12 | |
| 50 | 48 | 48 | |
| 51 | F1 | F1 | |
| 52 | 18 | 18 | |
| 53 | 5D | 5D | |
| 54 | 66 | 66 | |

| Address | Initial value | | Remark |
|----------|---------------|-----|---|
| | NTSC | PAL | |
| 55 | 00 | 00 | Flange back adj. |
| 56 | 19 | 19 | |
| 57 | 00 | 00 | |
| 58 | 19 | 19 | |
| 59 | 00 | 00 | |
| 5A | 00 | 00 | |
| 5B | 04 | 04 | |
| 5C | 00 | 00 | Angular velocity sensor sensitivity data preset |
| 5D | 00 | 00 | |
| 5E | 69 | 9C | |
| 5F | 63 | A0 | Optical axis adj. |
| 60 | 00 | 00 | Flange back adj. |
| 61 | 00 | 00 | Hi8/Standard8 switching position adj. |
| 62 | 0A | 0A | |
| 63 | 00 | 00 | CAP FG duty adj. |
| 64 | 83 | 83 | Hi8/Standard8 AFC f ₀ adj. |
| 65 | 40 | 40 | Fixed data-1 (Initialized data) |
| 66 | | | Fixed data-2 |
| 67 | | | Fixed data-2 |
| 68 | | | |
| 69 to 7A | | | Fixed data-1 (Initialized data) |
| 7B | A6 | A6 | Hi8/Standard8 AFM 1.5 MHz deviation adj. |
| 7C | 94 | 94 | Hi8/Standard8 AFM 1.7 MHz deviation adj. |
| 7D | 80 | 80 | Hi8/Standard8 AFM BPF f ₀ adj. |
| 7E | 41 | 41 | IR video deviation adj. |
| 7F | 33 | 33 | IR audio deviation adj. |
| 80 | C7 | C7 | IR video carrier frequency adj. |
| 81 to 8A | | | Fixed data-1 (Initialized data) |
| 8B | | | Fixed data-2 |
| 8C to 93 | | | Fixed data-1 (Initialized data) |
| 94 | | | Fixed data-2 |
| 95 to 97 | | | Fixed data-1 (Initialized data) |
| 98 | | | Fixed data-2 |
| 99 to 9B | | | Fixed data-1 (Initialized data) |
| 9C | | | Fixed data-2 |
| 9D to 9F | | | Fixed data-1 (Initialized data) |
| A0 | | | Fixed data-2 |
| A1 to AA | | | Fixed data-1 (Initialized data) |
| AB | | | Fixed data-2 |
| AC to CA | | | Fixed data-1 (Initialized data) |
| CB | | | Fixed data-2 |
| CC | | | |
| CD | | | |
| CE | | | Fixed data-1 (Initialized data) |
| CF | | | Fixed data-2 |
| D0 to D2 | | | Fixed data-1 (Initialized data) |
| D3 | | | Fixed data-2 |
| D4 to D6 | | | Fixed data-1 (Initialized data) |
| D7 | FD | FC | Color reproduction adj. |
| D8 | F4 | F2 | |
| D9 to DE | | | Fixed data-1 (Initialized data) |
| DF | | | Fixed data-2 |

| Address | Initial value | | Remark |
|----------|---------------|-----|---------------------------------|
| | NTSC | PAL | |
| E0 | | | Fixed data-1 (Initialized data) |
| E1 | | | Fixed data-2 |
| E2 to F2 | | | Fixed data-1 (Initialized data) |
| F3 | | | Fixed data-2 |
| F4, F5 | | | Fixed data-1 (Initialized data) |
| F6 | | | Fixed data-2 |
| F7 to FF | | | Fixed data-1 (Initialized data) |

1-2-3. MODIFICATION OF B PAGE DATA

1. Modification of B Page Data

When replacing PC-77 board or IC105 of PC-77 board, change the data of the “Fixed data-2” address shown in the following tables by manual input.

| | |
|-------------------|----------|
| Mode | Memory |
| Adjusting Page | B |
| Adjusting Address | 17 to 1A |

Modifying Method:

- Before changing the data, select page: 0, address: 01, and set data: 01.
- New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
Note : If copy the data built in the different model, the camcorder may not operate.
- When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.

Processing after Completing Modification of B Page data

- Select page: 5, address: 0E, set data: 00, and press the PAUSE button of the adjustment remote commander.
- Select page: 5, address: 01, set data: FB, and press the PAUSE button of the adjustment remote commander.
- Select page: 5, address: 00, set data: 01, and press the PAUSE button of the adjustment remote commander.
- Select page: 5, address: 0E, and check that the data is “01”.
- Select page: 0, address: 01, and set data: 00.

2. B Page Table

Note: Fixed data-2: Modified data. (Refer to “1. Modification of B Page Data”)

| Address | Remark |
|----------|---------------------------------|
| 00 to 16 | Fixed data-1 (Initialized data) |
| 17 | Fixed data-2 |
| 18 | Fixed data-1 (Initialized data) |
| 19 | Fixed data-2 |
| 1A | |
| 1B to FF | Fixed data-1 (Initialized data) |

1-3. CAMERA SYSTEM ADJUSTMENTS

Before perform the camera system adjustments, Check that the specified values of “27 MHz/36 MHz Origin Oscillation Adjustment”, “S VIDEO OUT Y level Adjustment” and “S VIDEO OUT C level Adjustment” of “VIDEO SYSTEM ADJUSTMENT” are satisfied.

1. HALL Adjustment

For detecting the position of the lens iris, adjust the hall AMP gain and offset.

| | |
|----------------------|---|
| Subject | Not required |
| Measurement Point | Display data of page 1 |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | F |
| Adjustment Address | 38, 39, 3A |
| Specified Value | 88 to 8C during IRIS OPEN 15 to 19 during IRIS CLOSE |

Note: Displayed data of page 1 of the adjustment remote commander.

1 : 00 : XX
 └── Display data

Adjusting method:

- Select page: 0, address: 01, and set data: 01.
- Select page: 6, address: 94, and set data: 8A.
- Select page: 6, address: 95, and set data: 17.
- Select page: 6, address: 01, set data: 6D, and press the PAUSE button of the adjustment remote commander. (The HALL adjustment is performed and the adjustment data is stored in page: F, address: 38, 39 and 3A)
- Select page: 6, address: 02, and check that the data is “01”.
- Select page: 6, address: 01, set data: 00, and press the PAUSE button.

Checking method:

- Select page: 0, address: 03, and set data: 03.
- Select page: 6, address: 01, set data: 01, and press the PAUSE button.
- Select page: 1, and check that the display data (Note) during IRIS OPEN satisfies the specified value.
- Select page: 6, address: 01, set data: 03, and press the PAUSE button.
- Select page: 1, and check that the display data during IRIS CLOSE satisfies the specified value.

Processing after Completing Adjustments

- Select page: 6, address: 94, and set data: 00.
- Select page: 6, address: 95, and set data: 00.
- Select page: 0, address: 03, and set data: 00.
- Select page: 0, address: 01, and set data: 00.
- Select page: 6, address: 01, set data: 00, and press the PAUSE button.

2. Flange Back Adjustment (Using the minipattern box)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

| | |
|----------------------|--|
| Subject | Siemens star chart with ND filter for the minipattern box (Note 1) |
| Measurement Point | Check operation on TV monitor |
| Measuring Instrument | |
| Adjustment Page | F |
| Adjustment Address | 4E to 5D, 61 |

Note 1: Dark Siemens star chart.

Note 2: Perform this adjustment after performing “HALL adjustment”.

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Preparation for adjustment

The minipattern box is installed as shown in the following figure.

Note: The attachment lenses are not used.

Specified voltage: The specified voltage varies according to the minipattern box, so adjust the power supply output voltage to the specified voltage written on the sheet which is supplied with the minipattern box.

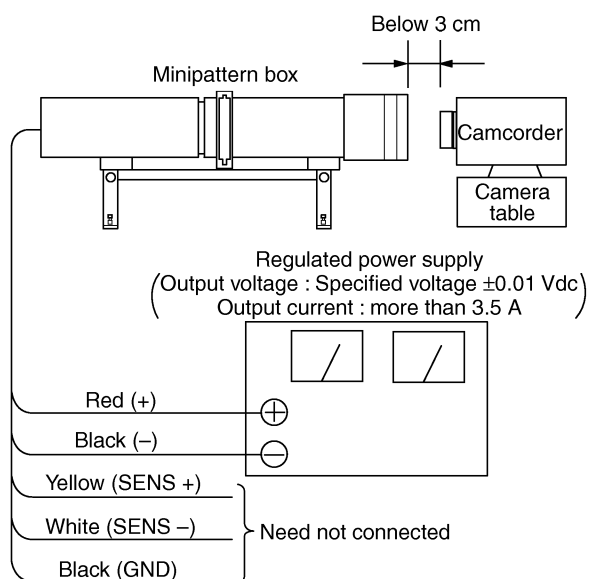


Fig. 5-1-8

Adjusting method:

- 1) Install the minipattern box so that the distance between it and the front of the lens of the camcorder is less than 3 cm.
- 2) Make the height of the minipattern box and the camcorder equal.
- 3) Check that the output voltage of the regulated power supply is the specified voltage ± 0.01 Vdc.
- 4) Check that at both the zoom lens TELE end and WIDE end, the center of the Siemens star chart and center of the exposure screen coincide.
- 5) Select page: 0, address: 01, and set data: 01.
- 6) Select page: 6, address: 82, and set data: 01.
- 7) Check that the data of page: F, address: 4E to 5D and 61 is the initial value (See table below).

| Address | Data | Address | Data |
|---------|------|---------|------|
| 4E | 2E | 57 | 00 |
| 4F | 12 | 58 | 19 |
| 50 | 48 | 59 | 00 |
| 51 | F1 | 5A | 00 |
| 52 | 18 | 5B | 04 |
| 53 | 5D | 5C | 00 |
| 54 | 66 | 5D | 00 |
| 55 | 00 | 61 | 00 |
| 56 | 19 | | |

- 8) Select page: 6, address: 02, and check that the data is “00”.
- 9) Select page: 6, address: 01, set data: 13, and press the PAUSE button of the adjustment remote commander.
- 10) Select page: 6, address: 01, set data: 27, and press the PAUSE button.
(The adjustment data will be automatically input to page: F, addresses: 4E to 5D and 61)
- 11) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments

- 1) Turn OFF the main power supply (8.4 V).
- 2) Perform “Flange Back Check”.

3. Flange Back Adjustment

(Using Flange Back Adjustment Chart Subject More Than 500 m Away)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

3-1. Flange Back Adjustment (1)

| | |
|----------------------|---|
| Subject | Flange back adjustment chart (2.0 m from the front of the lens) (Luminance: 350 ± 50 lux) |
| Measurement Point | Check operation on TV monitor |
| Measuring Instrument | |
| Adjustment Page | F |
| Adjustment Address | 4E to 5D, 61 |

Note : Perform this adjustment after performing “HALL adjustment”.

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Adjusting method:

- 1) Check that at both the zoom lens TELE end and WIDE end, the center of the chart for the flange back adjustment and center of the exposure screen coincide.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 6, address: 82, and set data: 01.
- 4) Check that the data of page: F, address: 4E to 5D, 61 is the initial value (See table below).

| Address | Data | Address | Data |
|---------|------|---------|------|
| 4E | 2E | 57 | 00 |
| 4F | 12 | 58 | 19 |
| 50 | 48 | 59 | 00 |
| 51 | F1 | 5A | 00 |
| 52 | 18 | 5B | 04 |
| 53 | 5D | 5C | 00 |
| 54 | 66 | 5D | 00 |
| 55 | 00 | 61 | 00 |
| 56 | 19 | | |

- 5) Select page: 6, address: 02, and check that the data is “00”.
- 6) Select page: 6, address: 01, set data: 13, and press the PAUSE button of the adjustment remote commander.
- 7) Select page: 6, address: 01, set data: 15, and press the PAUSE button.
(The adjustment data will be automatically input to page: F, addresses: 4E to 5D, 61)
- 8) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments

- 1) Turn OFF the main power supply (8.4 V).
- 2) Perform “Flange Back Adjustment (2)”.

3-2. Flange Back Adjustment (2)

Perform this adjustment after performing “Flange Back Adjustment (1)”.

| | |
|----------------------|---|
| Subject | Subject more than 500m away (Subjects with clear contrast such as buildings, etc.) |
| Measurement Point | Check operation on TV monitor |
| Measuring Instrument | |
| Adjustment Page | F |
| Adjustment Address | 4E to 5D, 61 |

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Adjusting method:

- 1) Set the zoom lens to the TELE end and expose a subject that is more than 500 m away (subject with clear contrast such as building, etc.). (Nearby subjects less than 500 m away should not be in the screen)
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 6, address: 82, and set data: 01.
- 4) Select page: 6, address: 02, and check that the data is “00”.
- 5) Select page: 6, address: 01, set data: 13, and press the PAUSE button of the adjustment remote commander.
- 6) Place a ND filter on the lens so that the optimum image is obtain.
- 7) Select page: 6, address: 01, set data: 29, and press the PAUSE button.
(The adjustment data will be automatically input to page: F, addresses: 4E to 5D, 61)
- 8) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments

- 1) Select page: 0, address: 01, and set data: 00.
- 2) Turn OFF the main power supply (8.4 V).
- 3) Perform “Flange Back Check”.

4. Flange Back Check

| | |
|----------------------|---|
| Subject | Siemens star (PTB-450) (2.0 m from the front of the lens) (Luminance : approx. 200 lux) |
| Measurement Point | Check operation on TV monitor |
| Measuring Instrument | |
| Specified Value | Focused at the TELE end and WIDE end. |

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Note: When the auto focus is ON, the lens can be checked if it is focused or not by observing the data on the page 1 of the adjustment remote commander.

- 1) Select page: 0, address: 03, and set data: 0F.
- 2) Page 1 shows the state of the focus.

1 : 00 : XX

{ Odd: Focused
Even: Unfocused

Checking method:

- 1) Place the Siemens star 2.0 m from the front of the lens.
- 2) To open the IRIS, decrease the luminous intensity to the Siemens star up to a point before noise appear on the image.
- 3) Select page: 6, address: 40, and set data: 02.
- 4) Select page: 6, address: 41, and set data: 01.
- 5) Shoot the Siemens star with the zoom TELE end.
- 6) Turn on the auto focus.
- 7) Check that the lens is focused (Note).
- 8) Select page: 6, address: 21, and set data: 10.
- 9) Shoot the Siemens star with the zoom WIDE end.
- 10) Observe the TV monitor and check that the lens is focused.

Processing after Completing Adjustments

- 1) Select page: 6, address: 21, and set data: 00.
- 2) Select page: 6, address: 40, and set data: 00.
- 3) Select page: 6, address: 41, and set data: 00.
- 4) Select page: 0, address: 03, and set data: 00.

5. Optical Axis Adjustment

Correct a deviation of optical axis between the lens and the CCD imager.

If deviated, the screen center will be shifted when the lens is zoomed from TELE end to WIDE end.

| | |
|----------------------|-------------------------------|
| Subject | Siemens Star (PTB-450) |
| Measurement Point | Check operation on monitor TV |
| Measuring Instrument | |
| Adjustment Page | F |
| Adjustment Address | 60 |

Note: “Flange Back Adjustment” must be already finished.

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Preparation for adjustment:

- 1) Play a monoscope portion of the System Check tape (WR5-5ND(NTSC) or WR5-5CD(PAL)).
- 2) Stick the optical axis deviation specification frame to the monitor screen so that the center of monoscope coincides with the center of specification frame.
- 3) Select the CAMERA mode.

Adjustment method:

- 1) Select page:0, address:01, and set data:01.
- 2) Select page:F, address:60, and set data:00, then press the PAUSE button on the adjusting remote commander.
- 3) Place the Siemens Star at 2m position away from the lens.
- 4) Shoot the Siemens Star with the zoom at TELE end.
- 5) Change the lens direction so that the center of Siemens Star coincides with the center of optical axis deviation specification frame.
- 6) Shoot the Siemens Star with the zoom at WIDE end.
- 7) Check on the monitor TV which area the center of Siemens Star exists of the optical axis deviation specification frame. At this time, measure the amount of deviation “L1” (distance from the center of Siemens Star to the center of optical axis deviation specification frame).
- 8) From the following table, read correction data according to the area.

| Area | Deviation Phase | Correction Data |
|------|------------------|-----------------|
| 1 | 22.6° to 67.5° | 01 |
| 2 | 67.6° to 112.5° | 02 |
| 3 | 112.6° to 157.5° | 03 |
| 4 | 157.6° to 202.5° | 04 |
| 5 | 202.6° to 247.5° | 05 |
| 6 | 247.6° to 292.5° | 06 |
| 7 | 292.6° to 337.5° | 07 |
| 8 | 337.6° to 22.5° | 08 |

- 9) Select page:F, address:60, and set correction data, then press the PAUSE button on the adjusting remote commander.
- 10) Shoot the Siemens Star with the zoom at TELE end.
- 11) Change the lens direction so that the center of Siemens Star coincides with the center of optical axis deviation specification frame.
- 12) Shoot the Siemens Star with the zoom at WIDE end.
- 13) Measure the amount of deviation “L2” (distance from the center of Siemens Star to the center of optical axis deviation specification frame).
- 14) Compare L1 and L2, and make sure that the L2 is smaller than L1.
If large, select page:F, address:60, and set data:00, then press the PAUSE button on the adjusting remote commander.

Processing after completion of adjustment:

- 1) Select page:0, address:01, and set data:00.

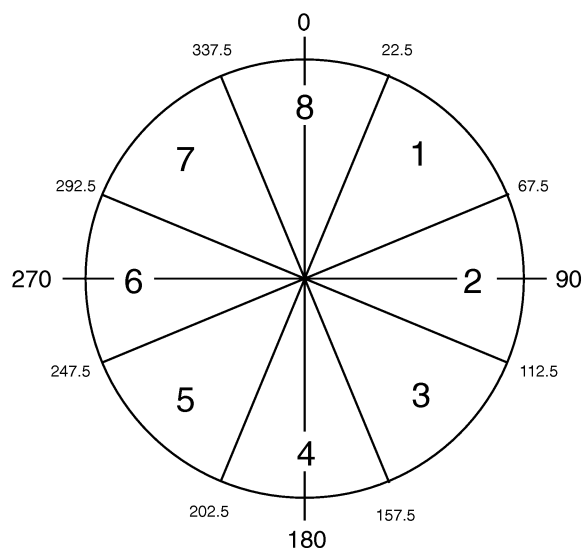


Fig. 5-1-9

6. Picture Frame Setting

| | |
|----------------------|--|
| Subject | Color bar chart (PTB-450) (Color reproduction adjustment frame) (1.5 m from the front of the lens) |
| Measurement Point | Video output terminal of A/V jack |
| Measuring Instrument | Oscilloscope and TV monitor |
| Specified Value | A=B, C=D, E=F |

Note: “Flange Back Adjustment” must be already finished.

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Setting method:

- 1) Select page: 6, address: 82, and set data: 01.
- 2) Adjust the zoom and the camera direction, and set to the specified position.
- 3) Select page: 6, address: 82, and set data: 00.
- 4) Mark the position of the picture frame on the monitor display, and adjust the picture frame to this position in following adjustments using “Color reproduction adjustment frame”.

Check on the oscilloscope

1. Horizontal period

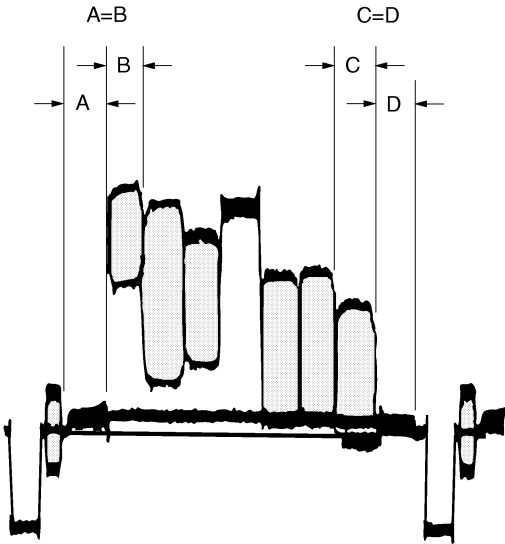


Fig. 5-1-10

2. Vertical period

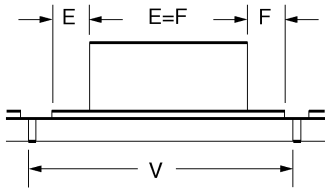


Fig. 5-1-11

Check on the monitor TV (Underscanned mode)

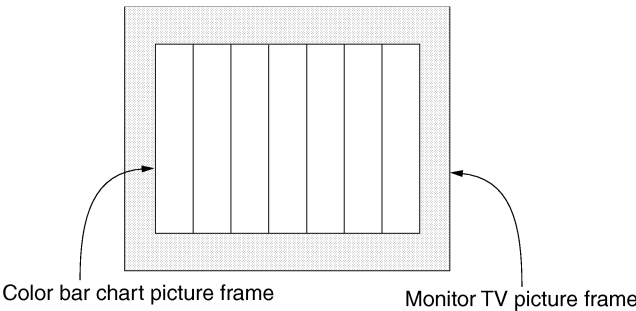


Fig. 5-1-12

7. Color Reproduction Adjustment

Adjust the color Separation matrix coefficient so that proper color reproduction is produced.

| | |
|----------------------|--|
| Subject | Color bar chart (PTB-450) (Color reproduction adjustment frame) |
| Measurement Point | Video output terminal of A/V jack |
| Measuring Instrument | Vectorscope |
| Adjustment Page | F |
| Adjustment Address | 47, 49, D7, D8 |
| Specified Value | All color luminance points should settle within each color reproduction frame. |

Note: NTSC 720H model: DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720
PAL 960H model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 6, address: 82, and set data: 01.
- 3) Select page: F, address: 8B. After note down the data of this address, set data: 29 to the address, and press the PAUSE button of the adjustment remote commander.
- 4) Select page: 6, address: 01, set data: 3D, and press the PAUSE button.
- 5) Select page: F, address: 2B, set data: 17 (NTSC 720H model) or data: 97 (PAL 960H model), and press the PAUSE button.
- 6) Adjust the GAIN and PHASE of the vectorscope, and adjust the burst luminance point to the burst position of the color reproduction frame.
- 7) Change the data of page: F, address: 47, 49, D7 and D8, and settle each color luminance point in each color reproduction frame.

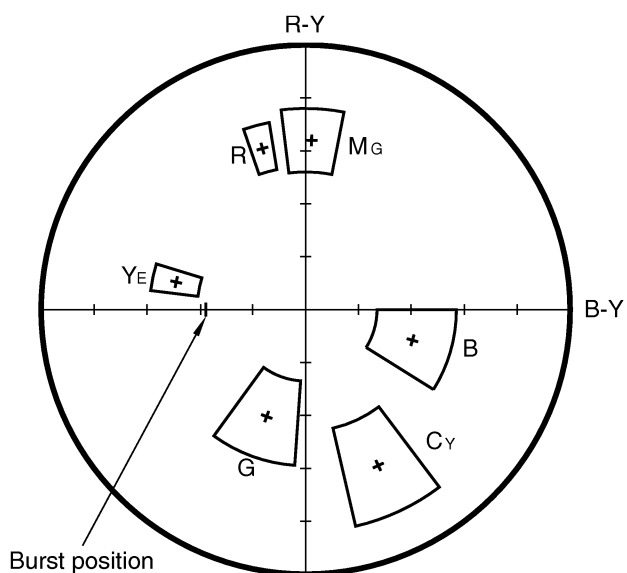
Note: Be sure to press the PAUSE button of the adjustment remote commander before changing the addresses. If not, the new data will not be written to the memory.

- 8) Select page: F, address: 8B, and set the data that is noted down at step 3).

Processing after Completing Adjustments

- 1) Select page: F, address: 2B, set data: 13 (NTSC 720H model) or data: 93 (PAL 960H model), and press the PAUSE button of the adjustment remote commander.
- 2) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 3) Select page: 6, address: 82, and set data: 00.
- 4) Select page: 0, address: 01, and set data: 00.

NTSC 720H model



PAL 960H model

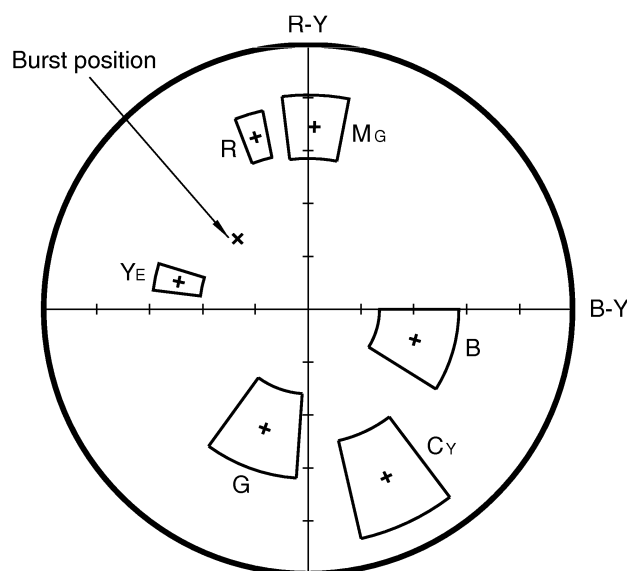


Fig. 5-1-13

8. AWB & LV Standard Data Input

| | |
|--------------------|--|
| Subject | Clear chart (PTB-450) (Color reproduction adjustment frame) |
| Adjustment Page | F |
| Adjustment Address | 3C to 41 |

Note 1: This adjustment should be carried out upon completion of “Color Reproduction Adjustment”.

Note 2: Check that the data of page: 6, address: 02 is “00”. If not, turn the power of the unit OFF/ON.

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 6, address: 82, and set data: 01.
- 3) Wait for 2 seconds.
- 4) Select page: 6, address: 01, set data: 11, and press the PAUSE button of the adjustment remote commander.
- 5) Select page: 6, address: 01, set data: 0D, and press the PAUSE button.
(When the standard data is take in, the data will be automatically input to page: F, address: 3C to 41)
- 6) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander.
- 2) Select page: 6, address: 82, and set data: 00.
- 3) Select page: 0, address: 01, and set data: 00.
- 4) Perform “Auto White Balance Adjustment”.

9. Auto White Balance Adjustment

Adjust to the proper auto white balance output data.

If it is not correct, auto white balance and color reproducibility will be poor.

| | |
|----------------------|---|
| Subject | Clear chart (PTB-450) (Color reproduction adjustment frame) |
| Filter | Filter C14 for color temperature correction |
| Measurement Point | Display data of page 1 (Note2) |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | F |
| Adjustment Address | 42, 43 |
| Specified Value | NTSC 720H model R ratio: 2A40 to 2AC0 B ratio: 60A0 to 6160 PAL 960H model R ratio: 2C40 to 2CC0 B ratio: 5FA0 to 6060 |

Note 1: Perform “Auto White Balance Standard Data Input” before this adjustment.

Note 2: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX

Display data

Note 3: NTSC 720H model: DCR-TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720

PAL 960H model: DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Adjusting method:

- 1) Place the C14 filter for color temperature correction on the lens.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 6, address: 82, and set data: 01.
- 4) Select page: F, addresses: B8 to BB, and note down the data of each address.
- 5) Input the following data to page: F, addresses: B8 to BB.

| Address | | B8 | B9 | BA | BB |
|---------|-----------------|----|----|----|----|
| Data | NTSC 720H model | 2A | 80 | 61 | 00 |
| | PAL 960H model | 2C | 80 | 60 | 00 |

Note: Press the PAUSE button of the adjustment remote commander each time to set the data.

- 6) Select page: 6, address: 01, set data: A7, and press the PAUSE button.
- 7) Wait for 2 seconds.
- 8) Select page: 6, address: 01, set data: A5, and press the PAUSE button.
(The auto white balance adjustment is performed and the adjustment data is stored in page: F, address: 42 and 43.)
- 9) Select page: 6, address: 02, and check that the data is “01”.
- 10) Select page: 6, address: 01, set data: 3F, and press the PAUSE button.
- 11) Select page: 0, address: 03, and set data: 04.
- 12) Select page: 1, and check that the display data (Note2) satisfies the R ratio specified value.
- 13) Select page: 0, address: 03, and set data: 05.
- 14) Select page: 1, and check that the display data (Note2) satisfies the B ratio specified value.
- 15) Select page: F, addresses: B8 to BB, and input the data noted down at step 3).

Note: After setting each data, be sure to press the PAUSE button of the adjustment remote commander.

Processing after Completing Adjustments

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 2) Select page: 6, address: 82, and set data: 00.
- 3) Select page: 0, address: 03, and set data: 00.
- 4) Select page: 0, address: 01, and set data: 00.

10. White Balance Check

| | |
|----------------------|--|
| Subject | Clear chart (PTB-450) (Color reproduction adjustment frame) |
| Filter | Filter C14 for color temperature correction ND filter 1.0, 0.4 and 0.1 |
| Measurement Point | Video output terminal of A/V jack |
| Measuring Instrument | Vectorscope |
| Specified Value | Fig. 5-1-14 A to C |

Switch setting:

- 1) NIGHT SHOT OFF
- 2) DIGITAL ZOOM (Menu display) OFF
- 3) STEADY SHOT (Menu display) OFF

Checking method:

- 1) Check that the lens is not covered with either filter.
- 2) Select page: 6, address: 82, and set data: 01.
- 3) Select page: 6, address: 01, set data: 0F, and press the PAUSE button of the adjustment remote commander.
- 4) Check that the center of the white luminance point is within the circle shown Fig. 5-1-14 (A).
- 5) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 6) Select page: 6, address: 01, set data: 23, and press the PAUSE button.
- 7) Place the C14 filter on the lens.
- 8) Check that the center of the white luminance point settles in the circle shown Fig. 5-1-14 (B).
- 9) Remove the C14 filter, and place the ND filter 1.5 (1.0 + 0.4 + 0.1) on the lens.
- 10) Check that the white luminance point stopped moving, and then remove the ND filter 1.5.
- 11) Check that the center of the white luminance point settles within the circle shown Fig. 5-1-14 (C).

Processing after Completing Adjustments

- 1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander.
- 2) Select page: 6, address: 82, and set data: 00.

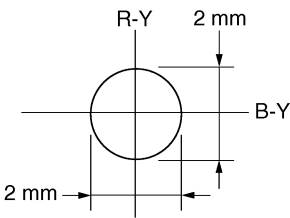


Fig. 5-1-14 (A)

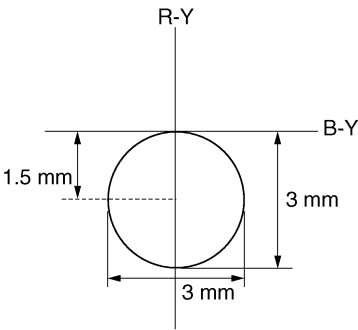


Fig. 5-1-14 (B)

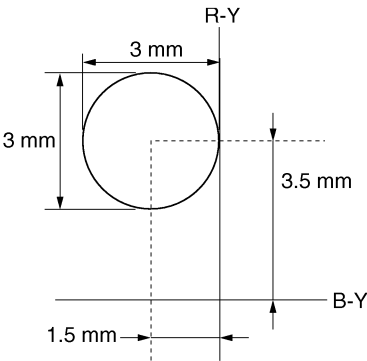


Fig. 5-1-14 (C)

11. Angular Velocity Sensor Sensitivity Data Preset and SteadyShot Check

Check the angular velocity sensor output.

Precautions on the Parts Replacement

There are two types of repair parts.

Type A ENC03JA

Type B ENC03JB

Replace the broken sensor with a same type sensor. If replace with other type parts, the image will vibrate up and down or left and right during hand-shake correction operations.

Precautions on Angular Velocity Sensor

The sensor incorporates a precision oscillator. Handle it with care as if it dropped, the balance of the oscillator will be disrupted and operations will not be performed properly.

| | |
|----------------------|--|
| Subject | Not required |
| Measurement Point | Display data of page 1 (Note 1) |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | F |
| Adjustment Address | 5E, 5F |
| Specified Value | PITCH data: 2900 to 4D00 YAW data: 2900 to 4D00 |

Note 1: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX

Display data

Note 2: NTSC model: DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720

PAL model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: F, address: 5E, set data: 69 (NTSC model) or 9C (PAL model), and press the PAUSE button.
- 3) Select page: F, address: 5F, set data: 63 (NTSC model) or A0 (PAL model), and press the PAUSE button.
- 4) Select page: 0, address: 03, and set data: 11.
- 5) Select page: 1, and check that the display data (Note 1) during PITCH data satisfies the specified value.
- 6) Select page: 0, address: 03, and set data: 12.
- 7) Select page: 1, and check that the display data during YAW data satisfies the specified value.

Processing after Completing Adjustments

- 1) Select page: 0, address: 03, and set data: 00.
- 2) Select page: 0, address: 01, and set data: 00.
- 3) Check that the steady shot operations have been performed normally.

1-4. MONOCHROME CRT ELECTRONIC VIEWFINDER SYSTEM ADJUSTMENTS (DCR-TRV320/TRV320E: E, HK, AUS, CN/TRV320P/TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P)

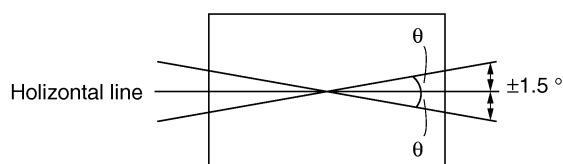
Note: NTSC model: DCR-TRV320/TRV320P/TRV520/TRV520P
PAL model: DCR-TRV320E/TRV420E: CN/TRV520E: E, HK, AUS, CN, JE

1-4-1. Horizontal Slant Check

| Mode | Playback |
|-----------------|--|
| Signal | Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section |
| Specified Value | $\pm 1.5^{\circ}$ |

Adjustment method:

- 1) Adjust RV904 (BRIGHT) (VF-129 board) so that the CRT can be seen easily and clearly.
- 2) Check that the difference between the horizontal line and the tilt of black mask satisfies the specified value.



Specified value : The image should be within $\pm 1.5^{\circ}$ of the horizontal line.

Fig. 5-1-15

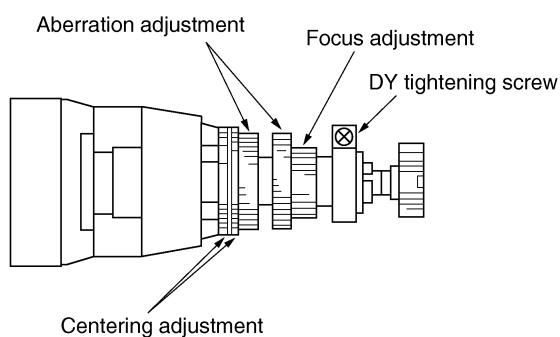


Fig. 5-1-16

1-4-2. Centering Adjustment

| Mode | Playback |
|-----------------|--|
| Signal | Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section |
| Specified Value | $\pm 4\%$ |

Adjustment method:

- 1) Use the centering adjustment ring and adjust so that the left, light, top, and bottom sides of the display are uniform. (Refer to Fig. 5-1-15)

Note: As the centering position changes due to earth magnetism, rotate it 360° in the horizontal direction, and adjust with the center section of the modifying position.

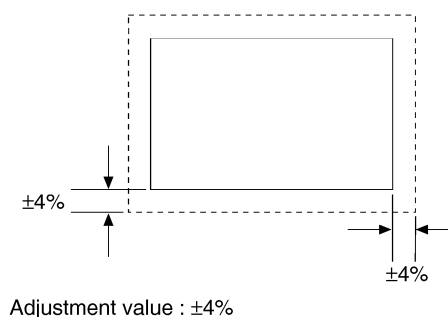


Fig. 5-1-17

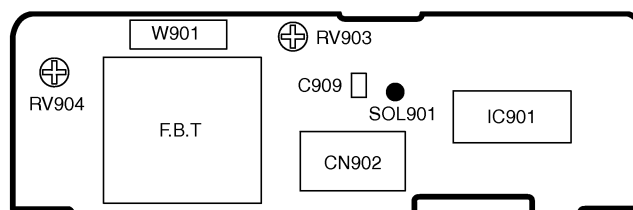
1-4-3. Focus Adjustment

| Mode | Playback |
|--------|--|
| Signal | Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section |

Adjustment method:

- 1) Adjust the focus ring to obtain the optimum focus. (Refer to Fig. 5-1-15)

VF-129 BOARD



1-4-4. Aberration Adjustment

| | |
|-----------------|--|
| Mode | VTR stop |
| Signal | Dot pattern |
| Specified Value | $b1 \leq 2 \times a1$ $b2 \leq 0.8 \times a2$ |

Adjustment method:

- 1) Adjust the aberration adjustment ring so that the tracing of the dot satisfies the specified value.
- 2) If the centering becomes displaced here, perform the centering adjustment from the beginning again.

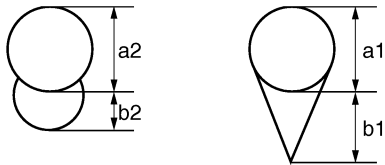


Fig. 5-1-18

1-4-5. Horizontal Amplitude Adjustment (VF-129 board)

| | |
|-------------------|--|
| Mode | Playback |
| Signal | Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section |
| Adjusting Element | C909 (SOL901) |
| Specified Value | $12 \pm 6\%$ |

Adjustment method:

- 1) Rotate RV903, and adjust the top and bottom side of the monoscope image to the top and bottom edges of the display.
- 2) Rotate RV904 so that the brightness is the normal level.
- 3) Solder or unsolder SOL901 pattern of the H size adjustment capacitor (C909) to “short” or “open”, so that the horizontal direction over scan becomes $12 \pm 6\%$ (Left and right totals).

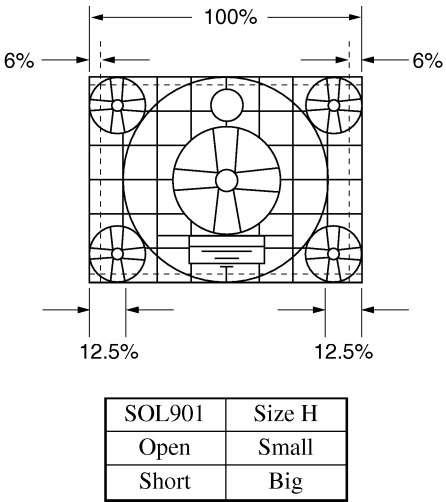
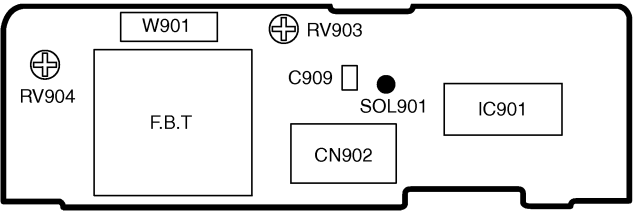


Fig. 5-1-19

VF-129 BOARD



1-4-6. Vertical Amplitude Adjustment (VF-129 board)

| | |
|-------------------|--|
| Mode | Playback |
| Signal | Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section |
| Adjusting Element | RV903 |
| Specified Value | 10 ± 3% |

Adjustment method:

- 1) Adjust RV903 so that the vertical direction over scan becomes 10 ± 3% (Top and bottom totals).

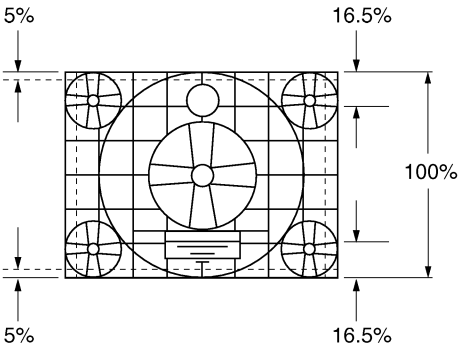


Fig. 5-1-20

1-4-7. Brightness Adjustment (VF-129 board)

| | |
|-------------------|--|
| Mode | Playback |
| Signal | Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section |
| Adjusting Element | RV904 |

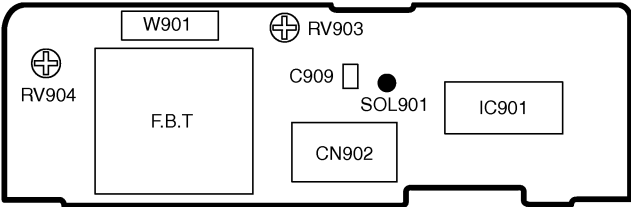
Adjustment method:

- 1) Rotate RV904, and adjust so that the bright/dark sections of gray scale are displayed correctly. (The bright section should be unsatisfactory till the cross hatch appears vague in the monoscope circle. The dark section should be unsatisfactory till the darkest section of the gray scale cannot be differentiate.)

1-4-8. Horizontal Amplitude, Vertical Amplitude, Focus Check

“1-4-5. Horizontal Amplitude Adjustment” and “1-4-6. Vertical Amplitude Adjustment” should be both satisfy the specified values. If not, perform the adjustments from the beginning again. In this case, perform “1-4-7. Brightness Adjustment” again. Moreover, check the focus, and if it found to be vague, perform “1-4-3. Focus Adjustment” and “1-4-4. Aberration Adjustment”.

VF-129 BOARD



1-5. LCD ELECTRONIC VIEWFINDER SYSTEM ADJUSTMENTS

(DCR-TRV320E: AEP, UK, EE, NE, RU/
TRV420E: AEP/TRV520E: AEP/TRV525/
TRV620E/TRV720/TRV720E)

Note 1: The back light (fluorescent tube) is driven by a high voltage AC power supply. Therefore, do not touch the back light holder to avoid electrical shock.

Note 2: When replacing the LCD unit, be careful to prevent damages caused by static electricity.

Note 3: COLOR LCD EVF model:

DCR-TRV525/TRV620E/TRV720/TRV720E

B/W LCD EVF model:

DCR-TRV320E: AEP, UK, EE, NE, RU/TRV420E:

AEP/TRV520E: AEP

[Adjusting connector]

Most of the measuring points for adjusting the viewfinder system are concentrated at VC-235 board CN1108. Connect the measuring instruments via the CPC-13 jig (J-6082-443-A). The following table lists the pin numbers and signal names of CN1108.

| Pin No. | Signal Name | Pin No. | Signal Name |
|---------|--------------|---------|-------------|
| 1 | SWP | 11 | VCO |
| 2 | AFC F0 | 12 | EVF VG |
| 3 | BPF MONI | 13 | DV RF SWP |
| 4 | F0 ADJ RF IN | 14 | RF IN |
| 5 | PB RF | 15 | CAP FG |
| 6 | REG GND | 16 | RF MON |
| 7 | RF AGC OUT | 17 | TMS |
| 8 | VC RF SWP | 18 | TCK |
| 9 | EVF BL | 19 | TDO |
| 10 | EVF BL 4.6V | 20 | TDI |

1. EVF Initial Data Input (1)

| | |
|--------------------|-----------|
| Mode | VTR stop |
| Signal | Arbitrary |
| Adjustment Page | C |
| Adjustment Address | 9B to A8 |

Adjusting method:

1) Select page: 0, address:01, and set data: 01.

2) Select page: C, and input the data in the following table.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

3) Select page: 0, address:01, and set data: 00.

| Address | Data | Remark |
|---------|------|------------|
| 9B | 4C | Fixed data |
| 9C | 00 | |
| 9D | A0 | |
| 9E | CE | |
| 9F | 64 | |
| A0 | 24 | |
| A1 | 00 | |
| A2 | 80 | |
| A3 | 12 | |
| A4 | 0C | |
| A5 | 25 | |
| A6 | 00 | |
| A7 | 08 | |
| A8 | 18 | |

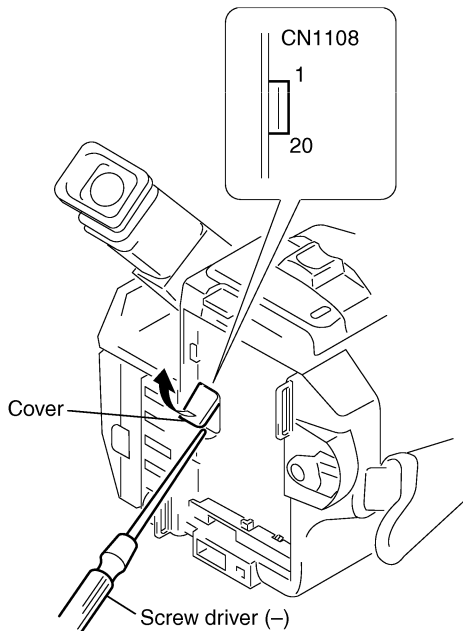


Fig. 5-1-21

2. EVF Initial Data Input (2)

| | |
|--------------------|------------------|
| Mode | VTR stop |
| Signal | Arbitrary |
| Adjustment Page | D |
| Adjustment Address | 92 to 9F, B0, B2 |

Note: COLOR LCD EVF model:

DCR-TRV525/TRV620E/TRV720/TRV720E

B/W LCD EVF model:

DCR-TRV320E: AEP, UK, EE, NE, RU/TRV420E:

AEP/TRV520E: AEP

Adjusting method:

- 1) Select page: 0, address:01, and set data: 01.
- 2) Select page: D, and input the data in the following table.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

- 3) Select page: 0, address:01, and set data: 00.

| Address | Data | | Remark |
|---------|-------|-----|---|
| | COLOR | B/W | |
| 92 | 80 | 80 | VCO adj. |
| 93 | 70 | 70 | VCO adj. (PAL model) Fixed data (NTSC model) |
| 94 | 26 | 26 | Fixed data |
| 95 | A0 | A0 | RGB AMP adj. |
| 96 | 0F | 0F | Fixed data |
| 97 | 80 | 80 | White balance adj. (COLOR LCD EVF model) |
| 98 | 80 | 80 | Fixed data (B/W LCD EVF model) |
| 99 | 30 | 30 | Contrast adj. |
| 9A | 80 | 80 | Fixed data |
| 9B | 90 | 90 | |
| 9C | D0 | D0 | |
| 9D | 10 | 10 | Backlight consumption current adj. |
| 9E | 10 | 10 | |
| 9F | 1F | 18 | |
| B0 | FC | FC | Fixed data |
| B2 | FF | FF | |

3. VCO Adjustment (VF-141 board)

Set the VCO free-run frequency. If deviated, the EVF screen will be blurred.

| | |
|----------------------|---|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ⑩ of CN1108 (VCO) on VC-235 board |
| Measuring Instrument | Frequency counter |
| Adjustment Page | D |
| Adjustment Address | 92 (NTSC model) 92, 93 (PAL model) |
| Specified Value | f=15734 ± 30 Hz (NTSC model) f=15625 ± 30 Hz (PAL model) |

Note 1: NTSC model: DCR-TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720

PAL model: DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E

Adjusting method (NTSC model):

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 92, change the data and set the VCO frequency (f) to the specified value.
- 3) Press the PAUSE button of the adjustment remote commander.
- 4) Select page: 0, address: 01, and set data: 00.

Adjusting method (PAL model):

- 1) Select page: 0, address: 01, and set data: 01.
 - 2) Select page: D, address: 92, change the data, and set the VCO frequency (f) to the specified value.
 - 3) Press the PAUSE button of adjustment remote commander.
 - 4) Read the adjustment data of step 2), and this data is named D₉₂.
 - 5) Convert D₉₂ to decimal notation, and obtain D₉₂'.
- (Refer to Table 5-4-1 "Hexdecimal-decimal conversion table" of "5-4. Service Mode")
- 6) Calculate D₉₃' using following equations (decimal calculation), convert it to a hexadecimal number, and obtain D₉₃.

$$D_{93}' = D_{92}' - 26$$

Note2: If D₉₃' < 0, then D₉₃ = "00"

- 7) Select page: D, address: 93, set data D₉₃, and then press the PAUSE button of adjustment remote commander.
- 8) Select page: 0, address: 01, and set data: 00.

4. RGB AMP Adjustment (VF-141 board)

Set the D range of the RGB driver used to drive the LCD to the specified value. If deviated, the EVF screen will become blackish or saturated (whitish).

| | |
|----------------------|--|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ⑫ of CN1108 (EVF VG) on VC-235 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | 95 |
| Specified Value | A=7.00 ± 0.1 Vp-p (COLOR LCD EVF model) A=7.40 ± 0.1 Vp-p (B/W LCD EVF model) |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 95, change the data and set the voltage (A) between the reversed waveform pedestal and non-reversed waveform pedestal to the specified value.
- 3) Press the PAUSE button.
- 4) Select page: 0, address: 01, and set data: 00.

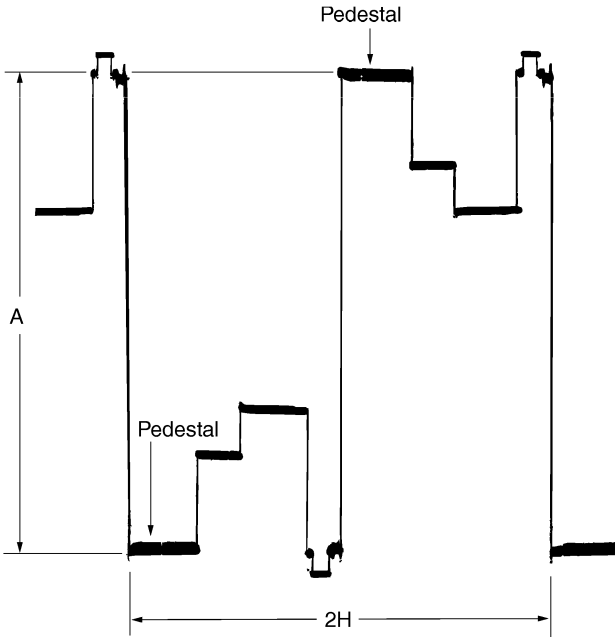


Fig. 5-1-22

5. Contrast Adjustment (VF-141 board)

Set the level of the VIDEO signal for driving the LCD to the specified value. If deviated, the screen image will be blackish or saturated (whitish).

| | |
|----------------------|---|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ⑫ of CN1108 (EVF VG) on VC-235 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | 99 |
| Specified Value | A=2.40 ± 0.1 Vp-p (NTSC model) A=2.20 ± 0.1 Vp-p (PAL model) |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 99, change the data and set the voltage (A) between the pedestal (0 IRE) and 100 IRE to the specified value.
(The data of address: 99, should be "00" to "7F")
- 3) Press the PAUSE button.
- 4) Select page: 0, address: 01, and set data: 00.

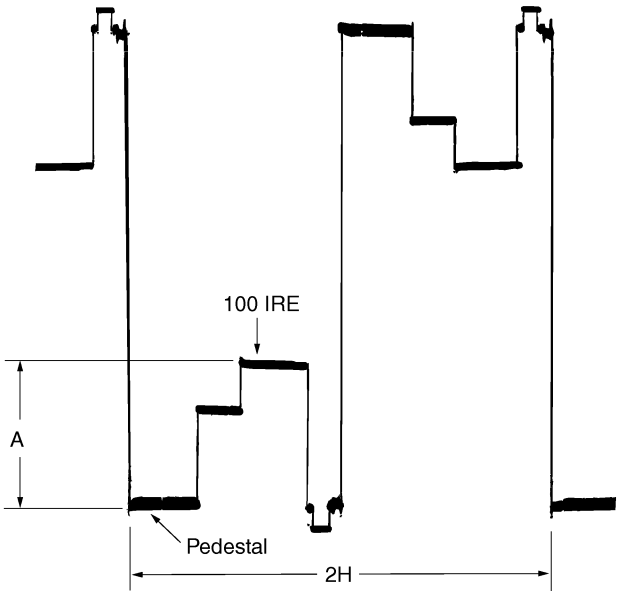


Fig. 5-1-23

6. Backlight Consumption Current Adjustment (VF-141 board)

Set the backlight luminance and color temperature.
If deviated, the image may become dark or bright.

| | |
|----------------------|---|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | +Probe: Pin ⑩ of CN1108 (EVF BL 4.6V on VC-235 board) -Probe: Pin ⑨ of CN1108 (EVF BL) on VC-235 board |
| Measuring Instrument | Digital voltmeter |
| Adjustment Page | D |
| Adjustment Address | 9C, 9D, 9E |
| Specified Value | COLOR LCD EVF model: BRIGHT mode: $A=15.0 \pm 1$ mV NORMAL mode: $A=10.0 \pm 1$ mV B/W LCD EVF model: BRIGHT mode: $A=11.0 \pm 1$ mV NORMAL mode: $A=7.0 \pm 1$ mV |

Note: COLOR LCD EVF model:
DCR-TRV525/TRV620E/TRV720/TRV720E
B/W LCD EVF model:
DCR-TRV320E: AEP, UK, EE, NE, RU/
TRV420E: AEP/TRV520E: AEP

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 9D, change the data, and set the voltage difference (A) between Pin ⑩ of CN1108 (EVF BL 4.6V) and Pin ⑨ of CN1108 (EVF BL) to the specified value of BRIGHT mode.
(The data of address: 9D, should be "00" to "3F")
- 3) Press the PAUSE button of adjustment remote commander.
- 4) Read the adjustment data of step 2), and this data is named D_{9D}.
- 5) Convert D_{9D} to decimal notation, and obtain D_{9D}'.
(Refer to Table 5-4-1. "Hexadecimal-decimal conversion table" of "5-4. Service Mode".)
- 6) Calculate D_{9C}' using following equations (decimal calculation), convert it to a hexadecimal number, and obtain D_{9C}.
$$D_{9C}' = D_{9D}' + 192$$
- 7) Select page: D, address: 9C, set data D_{9C}, and then press the PAUSE button of adjustment remote commander.
- 8) Select page: D, address: 9E, change the data, and set the voltage difference (A) between Pin ⑩ of CN1108 (EVF BL 4.6V) and Pin ⑨ of CN1108 (EVF BL) to the specified value of NORMAL mode.
(The data of address: 9D, should be "00" to "1F")
- 9) Press the PAUSE button of adjustment remote commander.
- 10) Select page: 0, address: 01, and set data: 00.

7. White Balance Adjustment (VF-141 board) (DCR-TRV525/TRV620E/TRV720/TRV720E)

Correct the white balance.

If deviated, the EVF screen color cannot be reproduced.

| | |
|----------------------|---------------------------------------|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Check on EVF display |
| Measuring Instrument | |
| Adjustment Page | D |
| Adjustment Address | 97, 98 |
| Specified Value | The EVF screen should not be colored. |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 97 and 98, and set the data to the initial value.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

| Address | Data |
|---------|------|
| 97 | 80 |
| 98 | 80 |

- 3) Check that the EVF screen is not colored. If colored, change the data of page: D, address: 97 and 98 so that the EVF screen is not colored.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

- 4) Select page: 0, address: 01, and set data: 00.

1-6. LCD SYSTEM ADJUSTMENTS

Note 1: The back light (fluorescent tube) is driven by a high voltage AC power supply. Therefore, do not touch the back light holder to avoid electrical shock.

Note 2: When replacing the LCD unit, be careful to prevent damages caused by static electricity.

Note 3: Set the LCD BRIGHT to the center.
Set the LCD COLOR (Menu display) to the center.

Note 4: 2.5 LCD model: DCR-TRV320/TRV320E/TRV320P
3 LCD model: DCR-TRV420E/TRV525
3.5 LCD model: DCR-TRV520/TRV520E/TRV520P/
TRV620E
4 LCD model: DCR-TRV720/TRV720E

| | PD board |
|-------------------|----------|
| 2.5 LCD model | PD-117 |
| 3/3.5/4 LCD model | PD-118 |

[Adjusting connector]

Most of the measuring points for adjusting the LCD display are concentrated in the following connector.
CN5502 of the PD-117/118 board

Connect the Measuring Instruments via the multi CPC jig (J-6082-311-A).

The following table shows the Pin No. and signal name of the connector.

| Pin No. | Signal Name | Pin No. | Signal Name |
|---------|-------------|---------|-------------|
| 1 | VB | 2 | XVD OUT |
| 3 | VG | 4 | PANEL.COM |
| 5 | VR | 6 | N.C. |
| 7 | C-SYNC/XHD | 8 | XHD OUT |
| 9 | GND | 10 | GND |

[LCD type check]

By measuring the resistor value between Pin ⑥ of CN5502 and Pin ⑩ of CN5502, the type of LCD can be discriminated.

PD-117/118 board CN5502

| Resistor value | LCD type |
|----------------|----------------------|
| 1 kΩ | 2.5 LCD TYPE S 61 k |
| 1.5 kΩ | 2.5 LCD TYPE C 61 k |
| 2.2 kΩ | 2.5 LCD TYPE S 123 k |
| 4.7 kΩ | 3 LCD TYPE S |
| 5.6 kΩ | 3.5 LCD TYPE S |
| 6.8 kΩ | 3.5 LCD TYPE C |
| 8.2 kΩ | 4 LCD TYPE S |
| 10 kΩ | 4 LCD TYPE C |

Abbreviation

EE : East European model
NE : North European model
RU : Russian model
HK : Hong Kong model
AUS : Australian model
CN : Chinese model

1. LCD Initial Data Input (1)

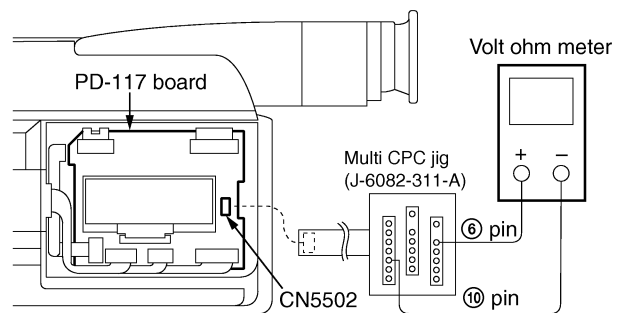
| | |
|--------------------|-----------|
| Mode | VTR stop |
| Signal | Arbitrary |
| Adjustment Page | C |
| Adjustment Address | AB to BA |

Adjusting method:

- 1) Select page: 0, address:01, and set data: 01.
- 2) Select page: C, and input the data in the following table.
Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
- 3) Select page: 0, address:01, and set data: 00.

| Address | Data | | | Remark |
|---------|------|----|-------|------------|
| | 2.5 | 3 | 3.5/4 | |
| AB | 53 | 53 | 53 | Fixed data |
| AC | 00 | 00 | 00 | |
| AD | 90 | 90 | 90 | |
| AE | CB | CB | CB | |
| AF | 66 | 68 | 6C | |
| B0 | 26 | 28 | 2C | |
| B1 | 00 | 00 | 00 | |
| B2 | 00 | 00 | 00 | |
| B3 | 20 | 20 | 20 | |
| B4 | 0A | 0A | 0A | |
| B5 | 24 | 24 | 24 | |
| B6 | 1A | 1A | 1A | |
| B7 | 08 | 0F | 0F | |
| B8 | 17 | 17 | 17 | |
| B9 | 21 | 21 | 21 | |
| BA | 23 | 23 | 23 | |

DCR-TRV320/TRV320E/TRV320P



DCR-TRV420E/TRV520/TRV520E/TRV520P/ TRV525/TRV620E/TRV720/TRV720E

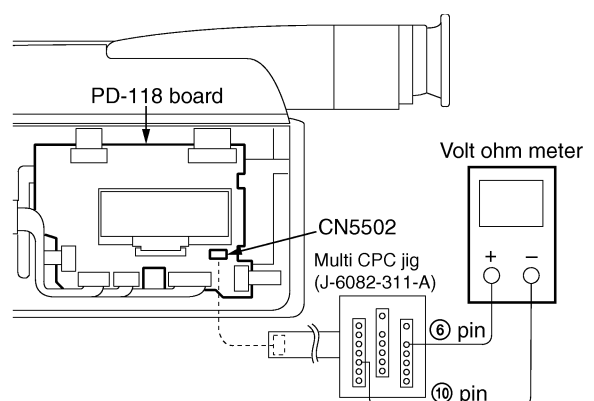


Fig. 5-1-24

2. LCD Initial Data Input (2)

| | |
|--------------------|--------------------|
| Mode | VTR stop |
| Signal | Arbitrary |
| Adjustment Page | D |
| Adjustment Address | A0 to AA, AC to B1 |

Adjusting method:

- 1) Select page: 0, address:01, and set data: 01.
- 2) Select page: D, and input the data in the following table.
Note 1: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
- 3) Select page: 0, address:01, and set data: 00.

| Address | Data | | Remark |
|---------|--------|--------|---|
| | TYPE S | TYPE C | |
| A0 | * | * | Fixed data (Note 3) |
| A1 | * | * | |
| A2 | 80 | 80 | VCO adj. |
| A3 | 70 | 70 | VCO adj. (PAL model) Fixed data (NTSC model) |
| A4 | 80 | 80 | V-COM adj. |
| A5 | 30 | 20 | RGB AMP adj. |
| A6 | 00 | 00 | Fixed data |
| A7 | C0 | 80 | COM AMP adj. |
| A8 | 80 | 80 | White balance adj. |
| A9 | 80 | 80 | |
| AA | 50 | 30 | Contrast adj. |
| AC | * | * | Fixed data (Note 3) |
| AD | * | * | |
| AE | 9F | 9F | Fixed data |
| AF | 1F | 1F | |
| B0 | FC | FC | |
| B1 | FF | FF | |

Note 2: * mark data

| Address | Data | | | | | | | |
|---------|--------|-------|----|-----|--------|------|-----|----|
| | TYPE S | | | | TYPE C | | | |
| | 2.5 | | 3 | 3.5 | 4 | 2.5 | 3.5 | 4 |
| | 61 k | 123 k | | | | 61 k | | |
| A0 | 78 | 78 | 6C | 70 | 7D | 78 | 70 | 7D |
| A1 | 95 | 95 | 85 | 8D | A6 | 95 | 8D | A6 |
| AC | 14 | 33 | 73 | 53 | 33 | 0A | 55 | 33 |
| AD | 14 | 14 | 14 | 14 | 14 | 0E | 13 | 13 |

3. VCO Adjustment (PD-117/118 board)

Set the VCO free-run frequency. If deviated, the LCD screen will be blurred.

| | |
|----------------------|---|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ⑥ of CN5502 (XHD OUT) |
| Measuring Instrument | Frequency counter |
| Adjustment Page | D |
| Adjustment Address | A2 (NTSC model) A2, A3 (PAL model) |
| Specified Value | f=15734 ± 30 Hz (NTSC model) f=15625 ± 30 Hz (PAL model) |

Note 1: NTSC model: DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720
PAL model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

Adjusting method (NTSC model):

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: A2, change the data and set the VCO frequency (f) to the specified value.
- 3) Press the PAUSE button of the adjustment remote commander.
- 4) Select page: 0, address: 01, and set data: 00.

Adjusting method (PAL model):

- 1) Select page: 0, address: 01, and set data: 01.
 - 2) Select page: D, address: A2, change the data, and set the VCO frequency (f) to the specified value.
 - 3) Press the PAUSE button of adjustment remote commander.
 - 4) Read the adjustment data of step 2), and this data is named DA2.
 - 5) Convert DA2 to decimal notation, and obtain DA2'.
- (Refer to Table 5-4-1 "Hexdecimal-decimal conversion table" of "5-4. Service Mode")
- 6) Calculate DA3' using following equations (decimal calculation), convert it to a hexadecimal number, and obtain DA3.
- 2.5 LCD TYPE C 61 k model/
2.5 LCD TYPE S 61 k model:

$$DA3' = DA2' - 16$$

2.5 LCD TYPE S 123 k model/
3 LCD TYPE S model/
4 LCD TYPE C model/
4 LCD TYPE S model:

$$DA3' = DA2' - 23$$

3.5 LCD TYPE C model/
3.5 LCD TYPE S model:

$$DA3' = DA2' - 4$$

Note 2: If $DA3' < 0$, then $DA3 = "00"$

- 7) Select page: D, address: A3, set data DA3, and then press the PAUSE button of adjustment remote commander.
- 8) Select page: 0, address: 01, and set data: 00.

4. RGB AMP Adjustment (PD-117/118 board)

Set the D range of the RGB driver used to drive the LCD to the specified value. If deviated, the LCD screen will become blackish or saturated (whitish).

| | |
|----------------------|--|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ③ of CN5502 (VG) External trigger : Pin ④ of CN5502 (PANEL COM) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | A5 |
| Specified Value | A=3.59 ± 0.05 Vp-p (TYPE S model) A=2.81 ± 0.05 Vp-p (2.5 LCD TYPE C 61 k model) A=3.20 ± 0.05 Vp-p (3.5/4 LCD TYPE C model) |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: A5, change the data and set the voltage (A) between the reversed waveform pedestal and non-reversed waveform pedestal to the specified value. (The data of address: A5, should be “00” to “3F”)
- 3) Press the PAUSE button.
- 4) Select page: 0, address: 01, and set data: 00.

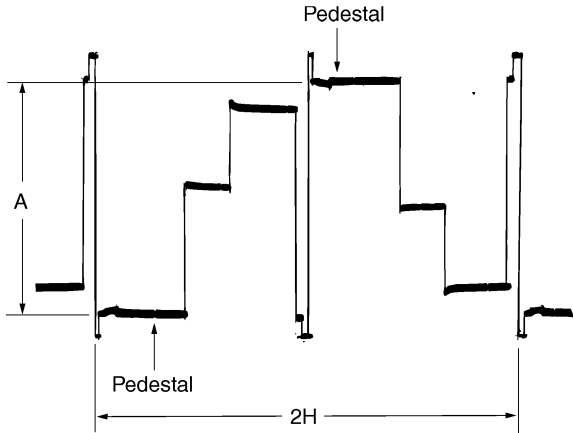


Fig. 5-1-25

5. Contrast Adjustment (PD-117/118 board)

Set the level of the VIDEO signal for driving the LCD to the specified value. If deviated, the screen image will be blackish or saturated (whitish).

| | |
|----------------------|--|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ③ of CN5502 (VG) External trigger : Pin ④ of CN5502 (PANEL COM) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | AA |
| Specified Value | A=3.47 ± 0.07 Vp-p (TYPE S 61 k model) A=3.34 ± 0.07 Vp-p (TYPE S 123 k model) A=2.80 ± 0.07 Vp-p (2.5 LCD TYPE C 61 k model) A=3.00 ± 0.07 Vp-p (3.5/4 LCD TYPE C model) |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: AA, change the data and set the voltage (A) between the pedestal (0 IRE) and 100 IRE to the specified value. (The data of address: AA, should be “00” to “7F”)
- 3) Press the PAUSE button.
- 4) Select page: 0, address: 01, and set data: 00.

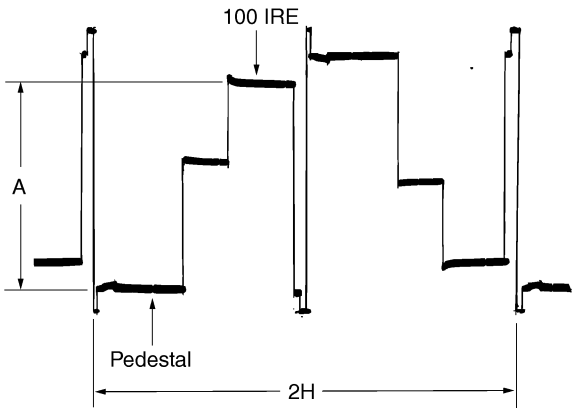


Fig. 5-1-26

6. COM AMP Adjustment (PD-117/118 board)

Set the common electrode drive signal level of LCD to the specified value.

| | |
|----------------------|---|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Pin ④ of CN5502 (PANEL COM) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | D |
| Adjustment Address | A7 |
| Specified Value | A=6.33 ± 0.05 Vp-p (2.5/3/4 LCD TYPE S model) A=6.10 ± 0.05 Vp-p (3.5 LCD TYPE S model) A=5.05 ± 0.05 Vp-p (2.5 LCD TYPE C 61 k model) A=5.50 ± 0.05 Vp-p (3.5/4 LCD TYPE C model) |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: A7, change the data and set the PANEL COM signal level (A) to the specified value.
- 3) Press the PAUSE button.
- 4) Select page: 0, address: 01, and set data: 00.

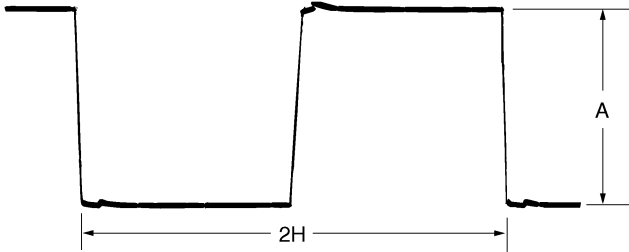


Fig. 5-1-27

7. V-COM Adjustment (PD-117/118 board)

Set the DC bias of the common electrode drive signal of LCD to the specified value.

If deviated, the LCD display will move, producing flicker and conspicuous vertical lines.

| | |
|----------------------|----------------------|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Check on LCD display |
| Measuring Instrument | |
| Adjustment Page | D |
| Adjustment Address | A4 |

Note: Perform “Bright Adjustment” and “Contrast Adjustment” before this adjustment.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: A4, change the data so that the brightness of the section A and that of the section B is equal.
- 3) Read the adjustment data of step 2), and this data is named Dref.
- 4) Convert Dref to decimal notation, and obtain Dref’.
(Refer to Table 5-4-1 “Hexdecimal-decimal conversion table” of “5-4. Service Mode”)
- 5) Calculate DA4’ using following equations (decimal calculation), convert it to a hexadecimal number, and obtain DA4.
 $DA4' = Dref' - 8$
- 6) Select page: D, address: A4, set data DA4, and then press the PAUSE button of adjustment remote commander.
- 7) Select page: 0, address: 01, and set data: 00.

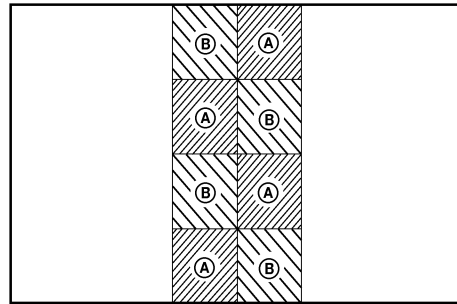


Fig. 5-1-28

8. White Balance Adjustment (PD-117/118 board)

Correct the white balance.

If deviated, the LCD screen color cannot be reproduced.

| | |
|----------------------|---------------------------------------|
| Mode | Camera |
| Subject | Arbitrary |
| Measurement Point | Check on LCD display |
| Measuring Instrument | |
| Adjustment Page | D |
| Adjustment Address | A8, A9 |
| Specified Value | The LCD screen should not be colored. |

Note 1: Check the white balance only when replacing the following parts. If necessary, adjust them.

1. LCD panel
2. Light induction plate
3. IC5501

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: A8 and A9, and set the data to the initial value.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

| Address | Data |
|---------|------|
| A8 | 80 |
| A9 | 80 |

- 3) Check that the LCD screen is not colored. If colored, change the data of page: D, address: A8 and A9 so that the LCD screen is not colored.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

- 4) Select page: 0, address: 01, and set data: 00.

5-2. MECHANISM SECTION ADJUSTMENT

Mechanism Section adjustments, checks, and replacement of mechanism parts, refer to the separate volume “8 mm Video Mechanism Adjustment Manual VII [B Mechanism]”.

Note 1: NTSC model: DCR-TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720
PAL model: DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E

2-1. Hi8/STANDARD 8 mm MODE

2-1-1. HOW TO ENTER PLAYBACK MODE WITHOUT CASSETTE

- 1) Refer to “Section 2. DISASSEMBLY” and supply the power with the cabinet assembly removed. (So that the mechanical deck can be operated)
- 2) Connect the adjustment remote commander to the LANC jack.
- 3) Turn on the HOLD switch of the adjustment remote commander.
- 4) Close the cassette compartment without loading a cassette and complete loading.
- 5) Select page: 0, address: 01, and set data: 01.
- 6) Select page: F, address: 22, set data: 81, and press the PAUSE button of the adjustment remote commander.
- 7) Select page: D, address: 10, set data: 10, and press the PAUSE button of the adjustment remote commander.
- 8) Select page: 2, address: 2E, and set data: 02.
- 9) Press the PLAY button of the unit.

Note2: Be sure to carry out “Processing after checking Operations” after checking the operations.
Set the data of page: D, address: 10 to “12”, if the sensor ineffective mode, forced VTR power supply ON mode is to be used together.

[Procedure after checking operations]

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 2, address: 2E, and set data: 00.
- 3) Select page: F, address: 22, set data: 80, and press the PAUSE button of the adjustment remote commander.
- 4) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Disconnect the power supply of the unit.

2-1-2. TAPE PATH ADJUSTMENT

1. Preparations for Adjustment

- 1) Clean the tape path face (tape guide, capstan shaft, pinch roller).
- 2) Connect the adjustment remote commander to the LANC jack.
- 3) Turn on the HOLD switch of the adjustment remote commander.
- 4) Select page: 0, address: 01, and set data: 01.
- 5) Select page: 2, address: 2E, and set data: 02.
- 6) Select page: F, address: 22, set data: 88, and press the PAUSE button of the adjustment remote commander.
(Be sure to perform “Processing after operation” after completing adjustments)
- 7) Connect the oscilloscope to VC-235 board CN1108 via CPC-13 jig (J-6082-443-A).
Channel 1: VC-235 board, CN1108 Pin ⑤
External trigger: VC-235 board, CN1108 Pin ⑧
- 8) Playback Hi8/standard 8 mm alignment tape for tracking.
(WR5-1NP(NTSC))
(WR5-1CP(PAL))
- 9) Check that the oscilloscope RF waveform is flat at the entrance and exit.
If not flat, adjust according to the separate volume “8 mm Video Mechanical Adjustment Manual VII [B Mechanism]”.
- 10) Perform “Processing after operations”, after completing adjustment.

CN1108 of VC-235 board

| Pin No. | Signal Name | Pin No. | Signal Name |
|---------|--------------|---------|-------------|
| 1 | SWP | 11 | VCO |
| 2 | AFC F0 | 12 | EVF VG |
| 3 | BPF MONI | 13 | DV RF SWP |
| 4 | F0 ADJ RF IN | 14 | RF IN |
| 5 | PB RF | 15 | CAP FG |
| 6 | REG GND | 16 | RF MON |
| 7 | RF AGC OUT | 17 | TMS |
| 8 | VC RF SWP | 18 | TCK |
| 9 | EVF BL | 19 | TDO |
| 10 | EVF BL 4.6V | 20 | TDI |

Table 5-2-1

[Procedure after operations]

- 1) Connect the adjustment remote commander, and turn on the HOLD switch.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 2, address: 2E, and set data: 00.
- 4) Select page: F, address: 22, set data: 80, and press the PAUSE button of the adjustment remote commander.
- 5) Select page: 0, address: 01, and set data: 00.
- 6) Remove the power supply from the unit.

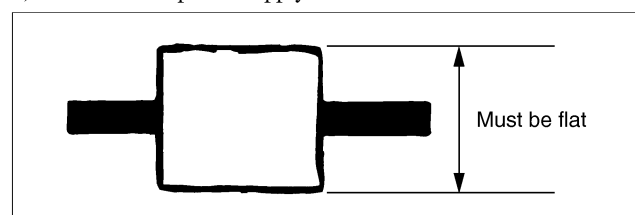


Fig. 5-2-1

2-2. DIGITAL8 MODE

2-2-1. HOW TO ENTER RECORD MODE WITHOUT CASSETTE

- 1) Connect the adjustment remote commander to the LANC jack.
- 2) Turn the HOLD switch of the adjustment remote commander to the ON position.
- 3) Close the cassette compartment without the cassette.
- 4) Select page: 3, address: 01, and set data: 0C, and press the PAUSE button of the adjustment remote commander. (The mechanism enters the record mode automatically)
Note: The function buttons becomes inoperable.
- 5) To quit the record mode, select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander. (Whenever you want to quit the record mode, be sure to quit following this procedure)

2-2-2. HOW TO ENTER PLAYBACK MODE WITHOUT CASSETTE

- 1) Connect the adjustment remote commander to the LANC jack.
- 2) Turn the HOLD switch of the adjustment remote commander to the ON position.
- 3) Close the cassette compartment without the cassette.
- 4) Select page: 3, address: 01, and set data: 0B, and press the PAUSE button of the adjustment remote commander. (The mechanism enters the playback mode automatically)
Note: The function buttons becomes inoperable.
- 5) To quit the playback mode, select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander. (Whenever you want to quit the playback mode, be sure to quit following this procedure)

2-2-3. OVERALL TAPE PATH CHECK

1. Recording of the tape path check signal

- 1) Clean the tape running side (tape guide, capstan shaft, pinch roller).
- 2) Connect the adjustment remote commander to the LANC jack.
- 3) Turn the HOLD switch of the adjustment remote commander to the ON position.
- 4) Set to the camera recording mode.
- 5) Select page: 3, address: 1C, set data: 5D, and press the PAUSE button of the adjustment remote commander.
- 6) Record for several minutes.
- 7) Release the camera recording mode.
- 8) Select page: 3, address: 1C, set data: 00, and press the PAUSE button.

2. Tape path check

- 1) Clean the tape running side (tape guide, capstan shaft, pinch roller).
- 2) Connect the adjustment remote commander to the LANC jack.
- 3) Turn the HOLD switch of the adjustment remote commander to the ON position.
- 4) Connect an oscilloscope to VC-235 board CN1108 via the CPC-13 jig (J-6082-443-A).
Channel 1: VC-235 board, CN1108 Pin ⑩ (Note)
External trigger: VC-235 board, CN1108 Pin ⑬
Note: Connect a 75 Ω resistor between Pins ⑩ of CN1108 and ⑥ (GND).
- 5) Select page: 2, address: 2E, and set data: 01.
- 6) Playback the tape path check signal.
- 7) Select page: 3, address: 33, and set data: 08.
- 8) Select page: 3, address: 26, and set data: 31.
- 9) Check that the oscilloscope RF waveform is flat at the entrance and exit.
If not flat, perform "2-1-2. TAPE PATH ADJUSTMENT " of "2-1. Hi8/STANDARD 8 mm MODE".
- 10) Select page: 3, address: 26, and set data: 00.
- 11) Select page: 3, address: 33, and set data: 00.
- 12) Select page: 2, address: 2E, and set data: 00.

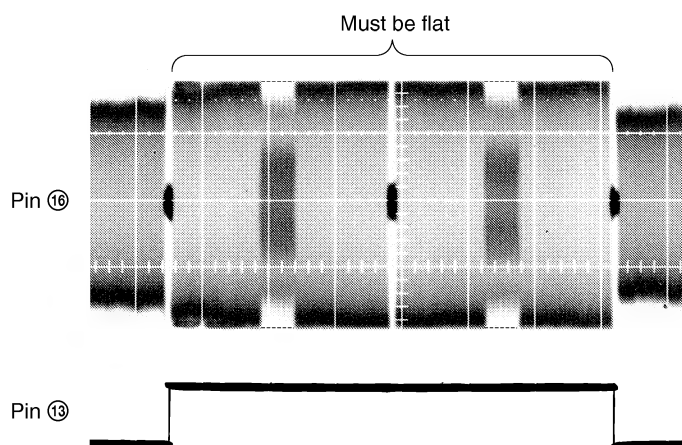


Fig. 5-2-2

5-3. VIDEO SECTION ADJUSTMENT

3-1. PREPARATIONS BEFORE ADJUSTMENTS

Use the following measuring instruments for video section adjustments.

Note: NTSC model: DCR-TRV320/TRV320P/TRV520/TRV520P/
TRV525/TRV720
PAL model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

3-1-1. Equipment to Required

- 1) TV monitor
- 2) Oscilloscope (dual-phenomenon, band width above 30 MHz with delay mode) (Unless specified otherwise, use a 10 : 1 probe)
- 3) Frequency counter
- 4) Pattern generator with video output terminal
- 5) Digital voltmeter
- 6) Audio generator
- 7) Audio level meter
- 8) Audio distortion meter
- 9) Audio attenuator
- 10) Regulated power supply
- 11) Digital8 alignment tapes
 - SW/OL standard (WR5-2D)
Parts code: 8-967-993-22
 - Audio operation check for NTSC (WR5-3ND)
Parts code: 8-967-993-32
 - System operation check for NTSC (WR5-5ND)
Parts code: 8-967-993-42
 - Audio operation check for PAL (WR5-3CD)
Parts code: 8-967-993-37
 - System operation check for PAL (WR5-5CD)
Parts code: 8-967-993-47
- 12) NTSC Hi8/standard 8 mm alignment tapes (For NTSC model)
 - For tracking adjustment (WR5-1NP)
Parts code: 8-967-995-02
 - For video frequency characteristics adjustment (WR5-7NE)
Parts code: 8-967-995-13
 - For checking Standard 8 mode operations
For LP (WR5-4NL)
Parts code: 8-967-995-51
For SP (WR5-5NSP)
Parts code: 8-967-995-42

Note: The following alignment tapes can also be used.
WR5-4NSP (8-967-995-41)

 - For checking Hi8 mode operations
For LP (WR5-8NLE)
Parts code: 8-967-995-52
For SP (WR5-8NSE)
Parts code: 8-967-995-43
 - For Checking AFM stereo operations (WR5-9NS)
Parts code: 8-967-995-23
 - For BPF adjustment (WR5-11NS)
Parts code: 8-967-995-71

- 13) PAL Hi8/standard 8 mm alignment tapes (For PAL model)
 - For tracking adjustment (WR5-1CP)
Parts code: 8-967-995-07
 - For video frequency characteristics adjustment (WR5-7CE)
Parts code: 8-967-995-18
 - For checking Standard 8 mode operations
For LP (WR5-4CL)
Parts code: 8-967-995-56
For SP (WR5-5CSP)
Parts code: 8-967-995-47

Note: The following alignment tapes can also be used.
1) WR5-3CL (8-967-995-36)
2) WR5-4CSP (8-967-995-46)

 - For checking Hi8 mode operations
For LP (WR5-8CLE)
Parts code: 8-967-995-57
For SP (WR5-8CSE)
Parts code: 8-967-995-48
 - For Checking AFM stereo operations (WR5-9CS)
Parts code: 8-967-995-28
 - For BPF adjustment (WR5-11CS)
Parts code: 8-967-995-76
- 14) Adjustment remote commander (J-6082-053-B)
- 15) CPC-13 jig (J-6082-443-A)
- 16) Power code (J-6082-223-A)

Note: Connect the adjustment remote commander to the LANC jack, and set the HOLD switch to the "ADJ" side.
- 17) IR receiver jig (J-6082-383-A)

3-1-2. Precautions on Adjusting

- 1) The adjustments of this unit are performed in the VTR mode or camera mode.
To set to the VTR mode, set the power switch to "VTR or PLAYER" or set the "Forced VTR Power ON mode" using the adjustment remote commander (Note 1).
To set to the Camera mode, set the power switch to "CAMERA" or set the "Forced Camera Power ON mode" using the adjustment remote commander (Note 2).
After completing adjustments, be sure to exit the "Forced VTR Power ON Mode" or "Forced Camera Power ON Mode". (Note 3)
- 2) The front panel block (MI-37 board, focus dial, microphone unit) need not be connected except during "Battery end adjustment" and "IR transmitter adjustment". To remove, disconnect the following connectors.
VC-235 board CN1111 (32P 0.5 mm)
- 3) By setting the "Forced VTR Power ON mode" or "Forced Camera Power ON mode", the video section can be operate even if the cabinet (R) block (Camera function switch (CF-69/70/72 board), LCD block, viewfinder) has been removed. But removing the cabinet (R) block (removing the VC-235 board CN1105) means removing the lithium 3 V power supply (CF-69/70/72 board BH001), data such as date, time, user-set menus will be lost. After completing adjustments, reset these data. If the cabinet (R) block has been removed, the self-diagnosis data, data on history of use (total drum rotation time etc.) will be lost. Before removing, note down the self-diagnosis data and data on history use (data of page: 2, address: A2 to AA). (Refer to "SELF-DIAGNOSIS FUNCTION" for the self-diagnosis data, and to "5-4. Service Mode" for the data on the history use) To remove the cabinet (R), disconnect the following connectors.
 1. VC-235 board CN1105 (45P, 0.5 mm)
 2. VC-235 board CN1109 (8P, 1.0 mm)
- 4) The lens block (CD-242/244/266/267/270/271 board) and the intelligent accessory shoe need not be connected except during "Battery end adjustment". To remove, disconnect the following connectors.
 1. VC-235 board CN1501 (16P, 0.5 mm)
 2. VC-235 board CN1551 (24P, 0.5 mm)
 3. Intelligent accessory shoe (8P, 0.8 mm)

Note 1: Setting the "Forced VTR Power ON" mode (VTR mode)

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 02, and press the PAUSE button of the adjustment remote commander.
The above procedure will enable the VTR power to be turned on with the power switch (SS-10000 block) removed.
After completing adjustments, be sure to exit the "Forced VTR Power ON mode".

Note 2: Setting the "Forced Camera Power ON" mode (Camera mode)

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 01, and press the PAUSE button of the adjustment remote commander.
The above procedure will enable the camera power to be turned on with the power switch (SS-10000 block) removed.
After completing adjustments, be sure to exit the "Forced Camera Power ON mode".

Note 3: Setting the "Forced Memory Power ON" mode (Memory mode)

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 05, and press the PAUSE button of the adjustment remote commander.
The above procedure will enable the memory power to be turned on with the power switch (SS-10000 block) removed.
After completing adjustments, be sure to exit the "Forced Memory Power ON mode".

Note 4: Exiting the "Forced Power ON" mode

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 0, address: 01, and set data: 00.

Note 5: 2.5 LCD model: DCR-TRV320/TRV320E/TRV320P

3 LCD model: DCR-TRV420E/TRV525

3.5 LCD model: DCR-TRV520/TRV520E/TRV520P/TRV620E

4 LCD model: DCR-TRV720/TRV720E

| | CF board |
|-----------------|----------|
| 2.5 LCD model | CF-69 |
| 3/3.5 LCD model | CF-70 |
| 4 LCD model | CF-72 |

Note 6: 720H model: DCR-TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720

960H model: DCR-TRV320E/TRV420E/TRV520E/TRV620E/TRV720E

| | | CD board |
|------------|-----------------|----------|
| 720H model | 2.5 LCD model | CD-242 |
| | 3/3.5 LCD model | CD-266 |
| | 4 LCD model | CD-270 |
| 960H model | 2.5 LCD model | CD-244 |
| | 3/3.5 LCD model | CD-267 |
| | 4 LCD model | CD-271 |

3-1-3. Adjusting Connectors

Some of the adjusting points of the video section are concentrated at VC-235 board CN1108. Connect the measuring instruments via the CPC-13 jig (J-6082-443-A). The following table lists the pin numbers and signal names of CN1108.

| Pin No. | Signal Name | Pin No. | Signal Name |
|---------|--------------|---------|-------------|
| 1 | SWP | 11 | VCO |
| 2 | AFC F0 | 12 | EVF VG |
| 3 | BPF MONI | 13 | DV RF SWP |
| 4 | F0 ADJ RF IN | 14 | RF IN |
| 5 | PB RF | 15 | CAP FG |
| 6 | REG GND | 16 | RF MON |
| 7 | RF AGC OUT | 17 | TMS |
| 8 | VC RF SWP | 18 | TCK |
| 9 | EVF BL | 19 | TDO |
| 10 | EVF BL 4.6V | 20 | TDI |

Table 5-3-1

3-1-4. Connecting the Equipment

Connect the measuring instruments as shown in Fig. 5-3-2 and perform the adjustments.

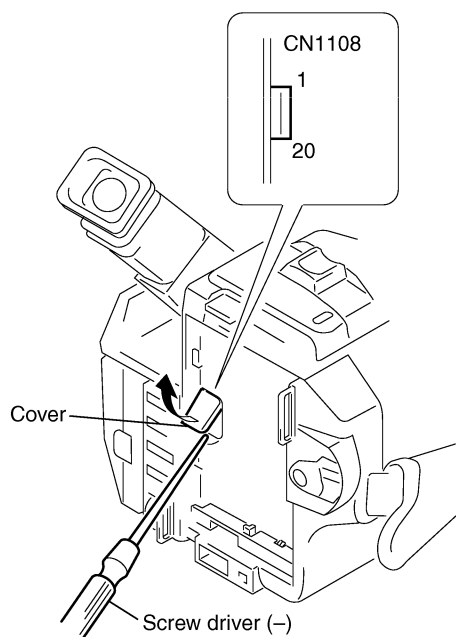


Fig. 5-3-1

Connecting the TV Monitor and Regulated Power Supply

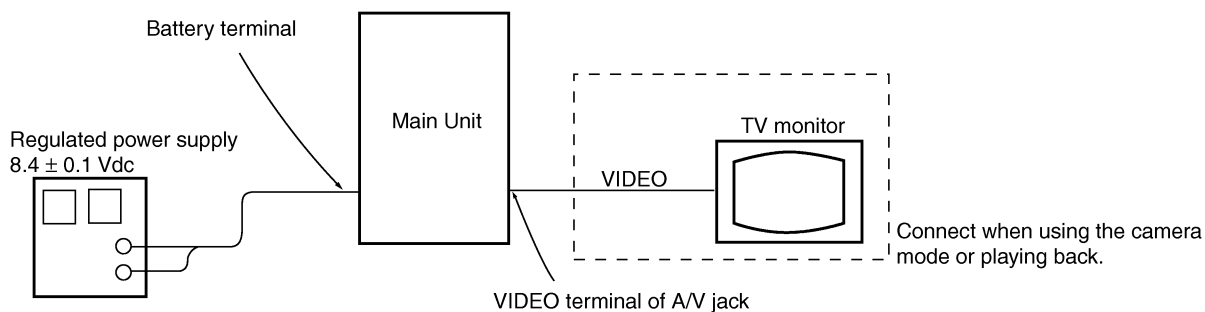


Fig. 5-3-2

3-1-5. Alignment Tape

The following table lists alignment tapes which are available.
Use the tape specified in the signal column for each adjustment. If the type of tape to be used for checking operations is not specified, use whichever type.

Digital8 alignment tape

| Name | Usage |
|--|-------------------------------|
| SW/OL standard (WR5-2D) | Switching position adjustment |
| Audio operation check (WR5-3ND (NTSC), WR5-3CD (PAL)) | Audio system adjustment |
| System operation check (WR5-5ND (NTSC), WR5-5CD (PAL)) | Operation check |

Hi8/standard 8 mm alignment tape

| Name | Recording mode | Tape type | Tape speed | Usage |
|--|----------------|-----------|-----------------------|---|
| Tracking (WR5-1NP (NTSC), WR5-1CP (PAL)) | Standard 8 mm | MP | SP | Tape path adjustment, Switching position adjustment |
| Video frequency characteristics (WR5-7NE (NTSC), WR5-7CE (PAL)) | Hi8 | ME | SP (NTSC) LP (PAL) | Frequency characteristics adjustment |
| Operation check (WR5-5NSP (NTSC), WR5-5CSP (PAL)) | Standard 8 mm | MP | SP | Operation check |
| Operation check (WR5-8NSE (NTSC), WR5-8CSE (PAL)) | Hi8 | ME | SP | |
| Operation check (WR5-4NL (NTSC), WR5-4CL (PAL)) | Standard 8 mm | MP | LP | |
| Operation check (WR5-8NLE (NTSC), WR5-8CLE (PAL)) | Hi8 | ME | LP | |
| AFM stereo operation check WR5-9NS (NTSC), WR5-9CS (PAL) | Standard 8 mm | MP | SP | AFM stereo Operation check |
| BPF adjustment WR5-11NS (NTSC), WR5-11CS (PAL) | Standard 8 mm | MP | SP | BPF adjustment |

Tape type

ME Particle type metal tape

MP Evaporated type metal tape

Table 5-3-2

Fig. 5-3-3 Shows the color bar signals recorded on the alignment tape.

Note: Measure using the VIDEO terminal (Terminated at 75 Ω).

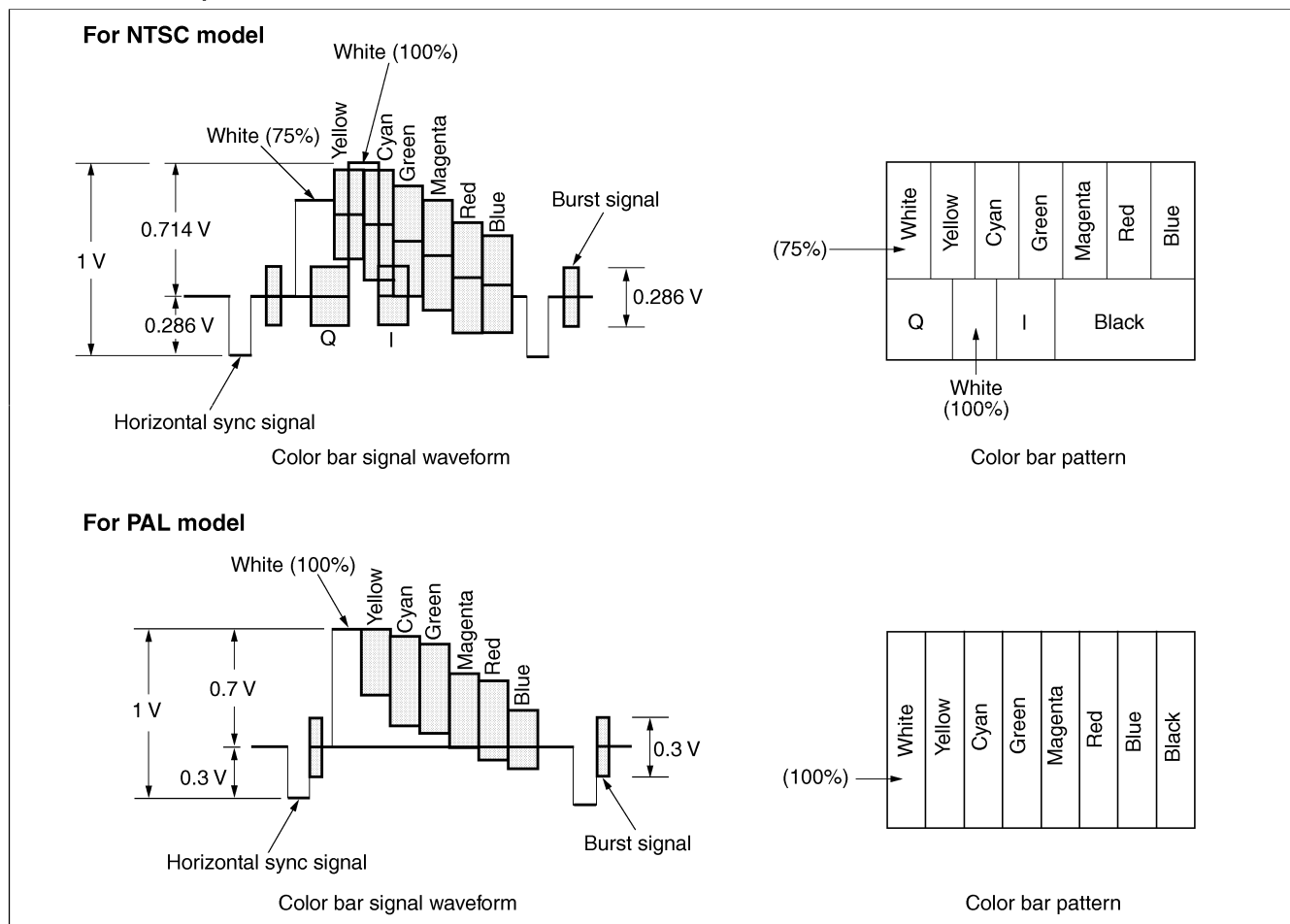


Fig. 5-3-3 Color Bar Signal of the Alignment Tape

3-1-6. Input/output Level and Impedance

Video input/output

Phono jack, 1 Vp-p, 75 Ω , unbalanced, sync negative

S video input/output

4-pin mini DIN

Luminance signal:

1 Vp-p, 75 Ω , unbalanced, sync negative

Chrominance signal:

0.286 Vp-p, 75 Ω , unbalanced (NTSC)

0.300 Vp-p, 75 Ω , unbalanced (PAL)

Audio input/output

Phono jack:

Input: -7.5 dBs, input impedance more than 47 k Ω

Output: -7.5 dBs, (at load impedance 47 k Ω), output impedance less than 2.2 k Ω

3-2. SYSTEM CONTROL SYSTEM ADJUSTMENT

1. Initialization of 7, 8, C, D, E, F Page Data

If the 7, 8, C, D, E, F page data is erased due to some reason, perform “1-2. INITIALIZATION OF 7, 8, C, D, E, F PAGE DATA”, of “5-1. CAMERA SECTION ADJUSTMENT”

2. Node Unique ID No. Input

Note 1: Perform “2-2. Input of Serial No.” if the data on page C has been cleared and the node unique ID No. is not found.

2-1. Input of Company ID

Write the company ID to the EEPROM (nonvolatile memory).

| | |
|---------|--------------------|
| Page | C |
| Address | E8, E9, EA, EB, EC |

Input method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Enter the following data.

Note 2: Each time the data is set, press the PAUSE button on the adjusting remote commander.

| Address | Data |
|---------|------|
| E8 | 08 |
| E9 | 00 |
| EA | 46 |
| EB | 01 |
| EC | 01 |

- 3) Select page: 0, address: 01, and set data: 00.

2-2. Input of Serial No.

Write the serial No. and model code to the EEPROM (nonvolatile memory).

In writing the serial No., a decimal number should be converted into a hexadecimal number.

| | |
|---------|------------|
| Page | C |
| Address | ED, EE, EF |

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Read the serial No. from the model name label, and it is assumed to be D₁.
Example: If serial No. is “77881”,
D₁ = 77881
- 3) From Table 5-3-3, obtain D₂ and H₁ that correspond to D₁.
Example: If D₁ = 77881,
D₂ = D₁ – 65536 = 12345
H₁ = 00

| D ₁ (decimal) | D ₂ (decimal) (Service model code) | H ₁ (hexadecimal) |
|--------------------------|--|------------------------------|
| 00001 to 65535 | D ₁ | 00 |
| 65536 to 131071 | D ₁ – 65536 | 00 |
| 131072 to 196607 | D ₁ – 131072 | 00 |
| 196608 to 262143 | D ₁ – 196608 | 00 |

Table 5-3-3

- 4) Enter H₁ to address: ED on page: C.
Example: If H₁ = 00,
select page: C, address: ED, and set data: 00, then press the PAUSE button.
- 5) From Table 5-3-4, obtain the maximum decimal number less than D₂, and it is assumed to be D₃.
Example: If D₂ = 12345,
D₃ = 12288
- 6) From Table 5-3-4, obtain a hexadecimal number that corresponds to D₃, and it is assumed to be H₃.
Example: If D₃ = 12288,
H₃ = 3000
- 7) Calculate D₄ using following equations (decimal calculation).
(0 ≤ D₄ ≤ 225)
D₄ = D₂ – D₃
Example: If D₂ = 12345 and D₃ = 12288,
D₄ = 12345 – 12288 = 57
- 8) Convert D₄ into a hexadecimal number to obtain H₄. (See Table 5-4-1 “Hexadecimal - decimal conversion table” in 5-4. Service Mode)
Example: If D₄ = 57,
H₄ = 39
- 9) Enter higher two digits of H₃ to address: EE on page: C.
Example: If H₃ = 3000,
select page: C, address: EE, and set data: 30, then press the PAUSE button.
- 10) Enter H₄ to address: EF on page: D.
Example: If H₄ = 39,
select page: C, address: EF, and set data: 39, then press the PAUSE button.
- 11) Select page: 0, address: 01, and set data: 00.

| D ₃ | H ₃ | D ₃ | H ₃ | D ₃ | H ₃ | D ₃ | H ₃ | D ₃ | H ₃ | D ₃ | H ₃ | D ₃ | H ₃ | D ₃ | H ₃ |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 | 0000 | 8192 | 2000 | 16384 | 4000 | 24576 | 6000 | 32768 | 8000 | 40960 | A000 | 49152 | C000 | 57344 | E000 |
| 256 | 0100 | 8448 | 2100 | 16640 | 4100 | 24832 | 6100 | 33024 | 8100 | 41216 | A100 | 49408 | C100 | 57600 | E100 |
| 512 | 0200 | 8704 | 2200 | 16896 | 4200 | 25088 | 6200 | 33280 | 8200 | 41472 | A200 | 49664 | C200 | 57856 | E200 |
| 768 | 0300 | 8960 | 2300 | 17152 | 4300 | 25344 | 6300 | 33536 | 8300 | 41728 | A300 | 49920 | C300 | 58112 | E300 |
| 1024 | 0400 | 9216 | 2400 | 17408 | 4400 | 25600 | 6400 | 33792 | 8400 | 41984 | A400 | 50176 | C400 | 58368 | E400 |
| 1280 | 0500 | 9472 | 2500 | 17664 | 4500 | 25856 | 6500 | 34048 | 8500 | 42240 | A500 | 50432 | C500 | 58624 | E500 |
| 1536 | 0600 | 9728 | 2600 | 17920 | 4600 | 26112 | 6600 | 34304 | 8600 | 42496 | A600 | 50688 | C600 | 58880 | E600 |
| 1792 | 0700 | 9984 | 2700 | 18176 | 4700 | 26368 | 6700 | 34560 | 8700 | 42752 | A700 | 50944 | C700 | 59136 | E700 |
| 2048 | 0800 | 10240 | 2800 | 18432 | 4800 | 26624 | 6800 | 34816 | 8800 | 43008 | A800 | 51200 | C800 | 59392 | E800 |
| 2304 | 0900 | 10496 | 2900 | 18688 | 4900 | 26880 | 6900 | 35072 | 8900 | 43264 | A900 | 51456 | C900 | 59648 | E900 |
| 2560 | 0A00 | 10752 | 2A00 | 18944 | 4A00 | 27136 | 6A00 | 35328 | 8A00 | 43520 | AA00 | 51712 | CA00 | 59904 | EA00 |
| 2816 | 0B00 | 11008 | 2B00 | 19200 | 4B00 | 27392 | 6B00 | 35584 | 8B00 | 43776 | AB00 | 51968 | CB00 | 60160 | EB00 |
| 3072 | 0C00 | 11264 | 2C00 | 19456 | 4C00 | 27648 | 6C00 | 35840 | 8C00 | 44032 | AC00 | 52224 | CC00 | 60416 | EC00 |
| 3328 | 0D00 | 11520 | 2D00 | 19712 | 4D00 | 27904 | 6D00 | 36096 | 8D00 | 44288 | AD00 | 52480 | CD00 | 60672 | ED00 |
| 3584 | 0E00 | 11776 | 2E00 | 19968 | 4E00 | 28160 | 6E00 | 36352 | 8E00 | 44544 | AE00 | 52736 | CE00 | 60928 | EE00 |
| 3840 | 0F00 | 12032 | 2F00 | 20224 | 4F00 | 28416 | 6F00 | 36608 | 8F00 | 44800 | AF00 | 52992 | CF00 | 61184 | EF00 |
| 4096 | 1000 | 12288 | 3000 | 20480 | 5000 | 28672 | 7000 | 36864 | 9000 | 45056 | B000 | 53248 | D000 | 61440 | F000 |
| 4352 | 1100 | 12544 | 3100 | 20736 | 5100 | 28928 | 7100 | 37120 | 9100 | 45312 | B100 | 53504 | D100 | 61696 | F100 |
| 4608 | 1200 | 12800 | 3200 | 20992 | 5200 | 29184 | 7200 | 37376 | 9200 | 45568 | B200 | 53760 | D200 | 61952 | F200 |
| 4864 | 1300 | 13056 | 3300 | 21248 | 5300 | 29440 | 7300 | 37632 | 9300 | 45824 | B300 | 54016 | D300 | 62208 | F300 |
| 5120 | 1400 | 13312 | 3400 | 21504 | 5400 | 29696 | 7400 | 37888 | 9400 | 46080 | B400 | 54272 | D400 | 62464 | F400 |
| 5376 | 1500 | 13568 | 3500 | 21760 | 5500 | 29952 | 7500 | 38144 | 9500 | 46336 | B500 | 54528 | D500 | 62720 | F500 |
| 5632 | 1600 | 13824 | 3600 | 22016 | 5600 | 30208 | 7600 | 38400 | 9600 | 46592 | B600 | 54784 | D600 | 62976 | F600 |
| 5888 | 1700 | 14080 | 3700 | 22272 | 5700 | 30464 | 7700 | 38656 | 9700 | 46848 | B700 | 55040 | D700 | 63232 | F700 |
| 6144 | 1800 | 14336 | 3800 | 22528 | 5800 | 30720 | 7800 | 38912 | 9800 | 47104 | B800 | 55296 | D800 | 63488 | F800 |
| 6400 | 1900 | 14592 | 3900 | 22784 | 5900 | 30976 | 7900 | 39168 | 9900 | 47360 | B900 | 55552 | D900 | 63744 | F900 |
| 6656 | 1A00 | 14848 | 3A00 | 23040 | 5A00 | 31232 | 7A00 | 39424 | 9A00 | 47616 | BA00 | 55808 | DA00 | 64000 | FA00 |
| 6912 | 1B00 | 15104 | 3B00 | 23296 | 5B00 | 31488 | 7B00 | 39680 | 9B00 | 47872 | BB00 | 56064 | DB00 | 64256 | FB00 |
| 7168 | 1C00 | 15360 | 3C00 | 23552 | 5C00 | 31744 | 7C00 | 39936 | 9C00 | 48128 | BC00 | 56320 | DC00 | 64512 | FC00 |
| 7424 | 1D00 | 15616 | 3D00 | 23808 | 5D00 | 32000 | 7D00 | 40192 | 9D00 | 48384 | BD00 | 56576 | DD00 | 64768 | FD00 |
| 7680 | 1E00 | 15872 | 3E00 | 24064 | 5E00 | 32256 | 7E00 | 40448 | 9E00 | 48640 | BE00 | 56832 | DE00 | 65024 | FE00 |
| 7936 | 1F00 | 16128 | 3F00 | 24320 | 5F00 | 32512 | 7F00 | 40704 | 9F00 | 48896 | BF00 | 57088 | DF00 | 65280 | FF00 |

Note: D₃: Decimal
H₃: Hexadecimal

Table 5-3-4

3. Battery End Adjustment (VC-235 board)

Set the battery end voltage.
If the voltage is incorrect, the life of the battery will shorten.
The image at the battery end will also be rough.

| | |
|----------------------|--|
| Mode | Camera recording |
| Subject | Arbitrary |
| Measurement Point | LCD display of the adjustment remote commander |
| Measuring Instrument | |
| Adjustment Page | D |
| Adjustment Address | 48, 49 |

Note: The lens block and cabinet (R) must be connected.

Switch setting:

- 1) AUTO FOCUSOFF
- 2) LCD screen Closed
- 3) NIGHT SHOTOFF

Connection:

- 1) Connect the regulated power supply and the digital voltmeter to the battery terminal as shown in Fig. 5-3-4.

Adjusting method:

- 1) Adjust the output voltage of the regulated power supply so that the digital voltmeter display is 6.1 ± 0.1 Vdc.
- 2) Turn off the power supply.
- 3) Turn on the HOLD switch of the adjustment remote commander.
- 4) Turn on the power supply.
- 5) Load a cassette, and set to the camera recording mode.
- 6) Select page: 0, address: 01, and set data: 01.
- 7) Decrease the output voltage of the regulated power supply so that the digital voltmeter display is 5.30 ± 0.01 Vdc.
- 8) Select page: 2, address: 5D, read the data, and this data is named Dref.
- 9) Select page: D, address: 48, set data: Dref, and press the PAUSE button of the adjustment remote commander.
- 10) Convert Dref to decimal notation, and obtain Dref'. (Refer to Table 5-4-1 "Hexadecimal-decimal conversion table" of "5-4. Service Mode")
- 11) Calculate D49' using following equations (decimal calculation), convert it to a hexadecimal number, and obtain D49.
 $D_{49}' = D_{ref}' + 8$
- 12) Select page: D, address: 49, set data D49, and then press the PAUSE button of adjustment remote commander.
- 13) Select page: 0, address: 01, and set data: 00.

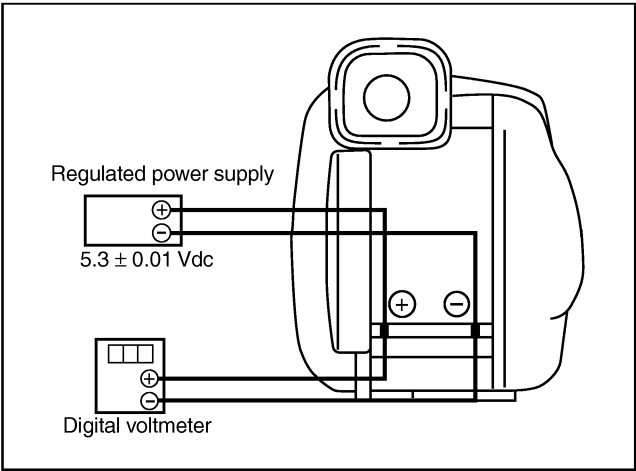


Fig. 5-3-4

3-3. SERVO AND RF SYSTEM ADJUSTMENTS

Before perform the servo and RF system adjustments, check that the specified value of “27 MHz/36MHz Origin Oscillation Adjustment” of “3-4. VIDEO SYSTEM ADJUSTMENT” is satisfied.

Adjusting Procedure:

1. REEL FG adjustment
2. PLL f_0 & LPF f_0 Pre-adjustment
3. Switching position adjustment
4. AGC center level adjustment
5. APC & AEQ adjustment
6. PLL f_0 & LPF f_0 final adjustment
7. Hi8/standard 8 mm switching position adjustment
8. CAP FG offset adjustment

1. REEL FG Adjustment (VC-235 board)

| | |
|----------------------|---------------------------------------|
| Mode | VTR stop |
| Measurement Point | Display data of page: 3, address: 03 |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | C |
| Adjustment Address | 17, 30 |
| Specified Value | Bit values of bit 1 and bit 3 are “0” |

Adjusting method:

- 1) Close the cassette compartment without loading a cassette and complete loading.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 3, address: 01, set data: 1C, and press the PAUSE button of the adjustment remote commander.
- 4) Select page: 3, address: 02, and check that the data changes to “00”.
- 5) Select page: 3, address: 03, and check that bit values of bit 1 and bit 3 are “0”.
If bit value of bit 1 and bit 3 is “1”, there are errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

| | |
|-----------------------------------|---------------------|
| Bit value of page: 3, address: 03 | Error contents |
| bit 3 = 1 | S REEL is defective |
| bit 1 = 1 | T REEL is defective |

- 6) Select page: 0, address: 01, and set data: 00.

2. PLL f_0 & LPF f_0 Pre-adjustment (VC-235 board)

| | |
|----------------------|--|
| Mode | VTR stop |
| Measurement Point | Display data of page: 3, address: 03 |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | C |
| Adjustment Address | 1F, 20, 22, 29 |
| Specified Value | Bit values of bit 2, bit 3 and bit 6 are “0” |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 3, address: 01, set data: 30, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 3, address: 02, and check that the data changes to “00”.
- 4) Select page: 3, address: 03, and check that bit values of bit2, bit3 and bit6 are “0”.
If bit value of bit 2, bit 3 or bit 6 is “1”, there are errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

| | |
|-----------------------------------|--|
| Bit value of page: 3, address: 03 | Error contents |
| bit 6 = 1 | LPF f_0 adjustment is defective |
| bit 3 = 1 | PLL f_0 , fine adjustment is defective |
| bit 2 = 1 | PLL f_0 , fine adjustment is defective |

If bit value of bit 2 or bit 3 is “1”, select page: C, address: 21, set the following data, and press the PAUSE button, and repeat steps 2) to 4).

| | |
|---|--------------|
| | Setting data |
| When the data of page: C, address: 21 is “CA” | CE |
| When the data of page: C, address: 21 is “CE” | C6 |
| When the data of page: C, address: 21 is “C6” | D2 |
| When the data of page: C, address: 21 is “D2” | C2 |

- 5) Select page: 0, address: 01, and set data: 00.

3. Switching Position Adjustment (VC-235 board)

To obtain normal playback waveform output, adjust the switching position.

| | |
|----------------------|---|
| Mode | VTR playback |
| Signal | Digital8 alignment tape : SW/OL standard (WR5-2D) |
| Measurement Point | Display data of page: 3, address: 03 |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | C |
| Adjustment Address | 10, 11, 12, 13 |
| Specified Value | 00 |

Adjusting method:

- 1) Insert the Digital8 SW/OL reference tape and enter the VTR STOP mode.
- 2) Select page: 0, address: 01, and set data: 01.
- 3) Select page: 3, address: 21, and check that the data is "02".
Note: If the data of page: 3, address: 21 is other than "72", the tape top being played. After playing the tape for 1 to 2 seconds, perform step 4) and higher.
If the data of page: 3, address: 21 is other than "62", the tape end being played. After rewind the tape, perform step 4) and higher.
- 4) Select page: 3, address: 01, set data: 0D, and press the PAUSE button of the adjustment remote commander.
- 5) Select page: 3, address: 02, wait data for stable condition as "00".
- 6) Select page: 3, address: 03, and check that the data is "00".
Note: If bit 0 of page: 3, address: 03 data is "1", the A channel is defective. If bit 1 is "1", the B channel is defective. Contents of the defect is written into page: C, addresses: 10 and 12. See the following table. (For the bit values, refer to "5-4. SERVICE MODE", "4-3. 3. Bit value discrimination")
- 7) Select page: 0, address: 01, and set data: 00.

When the A channel is defective

| | |
|------------------------------|---|
| Data of page: C, address: 10 | Contents of defect |
| EE | Writing into EEPROM (IC4502) is defective |
| E8 | Adjustment data is out of range |
| E7 | No data is returned from IC3301 (CAIN) |

When the B channel is defective

| | |
|------------------------------|--|
| Data of page: C, address: 12 | Contents of defect |
| E8 | Adjustment data is out of range |
| E7 | No data is returned from IC3301 (CAIN) |

4. AGC Center Level Adjustment (VC-235 board)

| | |
|----------------------|--|
| Mode | Camera record and playback |
| Subject | Arbitrary |
| Measurement Point | Pin ⑩ of CN1108 (RF MON) (Note 1) External trigger : Pin ⑬ of CN1108 (DV RF SWP) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | C |
| Adjustment Address | 1E |
| Specified Value | The display data of page: 3, address: 03 is "00" |

Note 1: Connect a 75 Ω resistor between Pin ⑩ and Pin ⑥ (GND) of CN1108.

75 Ω resistor (Parts code: 1-247-804-11)

Note 2: Use a Hi8 MP tape.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 8, address: 2A, set data: C8, and press the PAUSE button of the adjustment remote commander.
- 3) Record the camera signal for a minute.
- 4) Select page: 2, address: 2E, and set data: 01.
- 5) Playback the recorded segment.
- 6) Select page: 3, address: 33, and set data: 08.
- 7) Confirm that the playback RF signal is stable.
- 8) Select page: 3, address: 01, set data: 23, and press the PAUSE button.
- 9) Select page: 3, address: 02, and check that the data is "00".
- 10) Select page: 3, address: 03, and check that the data is "00".
Note 3: If the data of page: 3, address: 03 is other than "00", adjustment has errors.
- 11) Select page: 3, address: 33, and set data: 00.
- 12) Select page: 2, address: 2E, and set data: 00.
- 13) Select page: 8, address: 2A, set data: 00, and press the PAUSE button.
- 14) Select page: 0, address: 01, and set data: 00.

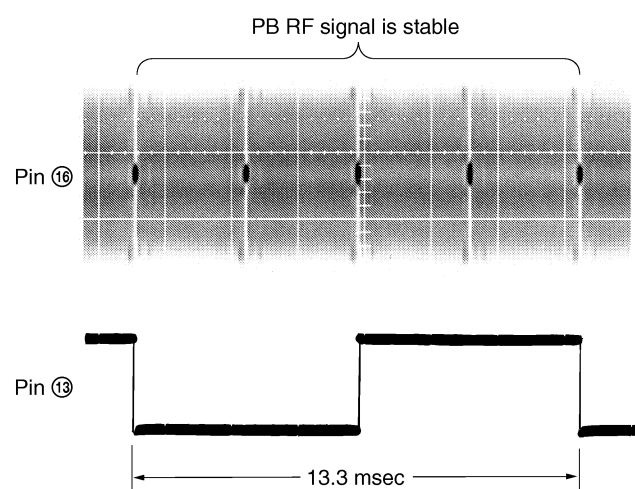


Fig. 5-3-5

5. APC & AEQ Adjustment (VC-235 board)

| | |
|----------------------|---|
| Mode | Camera record and playback |
| Subject | Arbitrary |
| Measurement Point | Pin ⑩ of CN1108 (RF MON) (Note 1) External trigger : Pin ⑬ of CN1108 (DV RF SWP) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | C |
| Adjustment Address | 18, 19, 1B, 1C, 21, 2C |
| Specified Value | The display data of page: 3, address: 03 is "00" |

Note 1: Connect a 75 Ω resistor between Pin ⑩ and Pin ⑥ (GND) of CN1108.

75 Ω resistor (Parts code: 1-247-804-11)

Note 2: Use a Hi8 MP tape.

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 8, address: 2A, set data: C8, and press the PAUSE button of the adjustment remote commander.
- 3) Record the camera signal for a minute.
- 4) Select page: 2, address: 2E, and set data: 01.
- 5) Playback the recorded segment.
- 6) Select page: 3, address: 33, and set data: 08.
- 7) Confirm that the playback RF signal is stable.
- 8) Select page: 3, address: 01, set data: 07, and press the PAUSE button.
- 9) Select page: 3, address: 02, and check that the data changes from "07" to "00" in about 20 seconds after pressing the PAUSE button.
- 10) Select page: 3, address: 03, and check that the data is "00".

Note 3: If the data of page: 3, address: 03 is other than "00", adjustment has errors.

- 11) Select page: 3, address: 33, and set data: 00.
- 12) Select page: 2, address: 2E, and set data: 00.
- 13) Select page: 8, address: 2A, set data: 00, and press the PAUSE button.
- 14) Select page: 0, address: 01, and set data: 00.

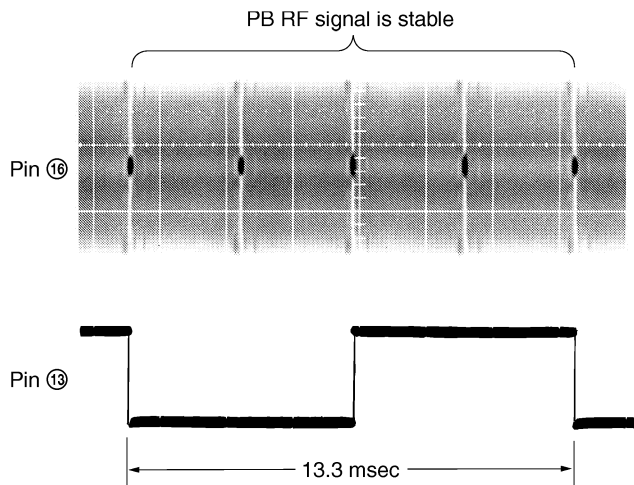


Fig. 5-3-6

6. PLL f_0 & LPF f_0 Final Adjustment (VC-235 board)

| | |
|----------------------|---|
| Mode | VTR stop |
| Signal | Arbitrary |
| Measurement Point | Display data of page: 3, address: 03 |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | C |
| Adjustment Address | 1F, 20, 22, 29 |
| Specified Value | Bit values of bit2, bit3 and bit6 are "0" |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 3, address: 01, set data: 30, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 3, address: 02, and check that the data changes to "00".
- 4) Select page: 3, address: 03, and check that bit values of bit2, bit3 and bit6 are "0".

Note: If bit value of bit 2, bit 3 or bit 6 is "1", there are errors. For the error contents, see the following table. (For the bit values, refer to "5-4. SERVICE MODE", "4-3. 3. Bit value discrimination")

| Bit value of page: 3, address: 03 | Error contents |
|-----------------------------------|--|
| bit 6 = 1 | LPF f_0 adjustment is defective |
| bit 3 = 1 | PLL f_0 , fine adjustment is defective |
| bit 2 = 1 | PLL f_0 , fine adjustment is defective |

- 5) Select page: 0, address: 01, and set data: 00.

7. Hi8/standard 8 mm Switching Position Adjustment (VC-235 board)

If deviated in this case causes switching noise or jitter on the Hi8/standard 8 mm mode played back screen.

| Mode | Playback |
|----------------------|---|
| Signal | Hi8/standard 8 mm alignment tape: For tracking adjustment (WR5-1NP (NTSC)) (WR5-1CP (PAL)) |
| Measurement Point | CH1: Pin ⑧ of CN1108 (VC RF SWP) CH2: Pin ⑤ of CN1108 (PB RF) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | F |
| Adjustment Address | 62, 63 |
| Specified Value | $t_1 = 0 \pm 10 \mu\text{sec}$ |

Adjusting Method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: F, address: 22, set data: C0, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 2, address: 2E, and set data: 02.
- 4) Set to the playback mode.
- 5) Select page: F, address: 62, change the data and minimize "t1", and then press the PAUSE button. (Coarse adjustment)
- 6) Select page: F, address: 63, change the data and adjust so that the switching position (t1) becomes the specified value. (Fine adjustment)
- 7) Press the PAUSE button.
- 8) Select page: F, address: 22, set data: 80, and press the PAUSE button.
- 9) Select page: 2, address: 2E, and set data: 00.
- 10) Select page: 0, address: 01, and set data: 00.

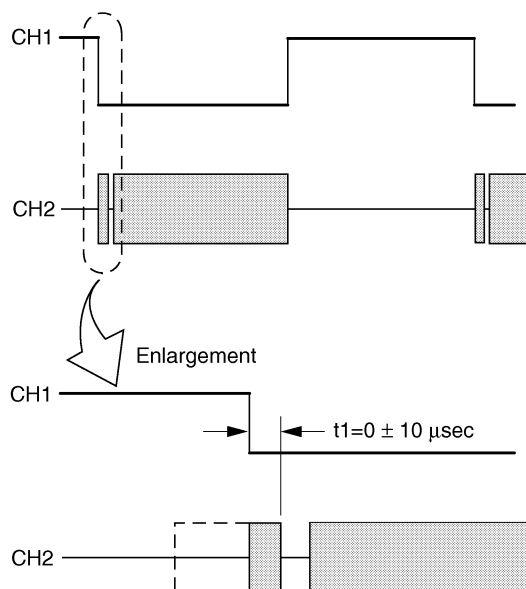


Fig. 5-3-7

8. CAP FG Duty Adjustment (VC-235 board)

Improve the capstan servo characteristic. If it is not correct, jitters will increase.

| Mode | Playback |
|----------------------|--|
| Signal | Hi8/standard 8 mm alignment tape: For checking operation (WR5-5NSP (NTSC)) (WR5-5CSP (PAL)) |
| Measurement Point | Pin ⑮ of CN1108 (CAP FG) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | F |
| Adjustment Address | 64 |
| Specified value | Duty=50 ± 1% |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 2, address: 2E, and set data: 02.
- 3) Set to the playback mode.
- 4) Select page: 6, address: 01, set data: 81, and press the PAUSE button of the adjustment remote commander. (to start up automatic CAP FG offset adjustment)
- 5) Select page: 6, address: 02, and check that the data is "01".
- 6) Check that Duty of CAP FG signal satisfies the specified value. If not, select page: 6, address: 01, set data: 00, and press the PAUSE button, and then, repeat steps 4) to 6).
- 7) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 8) Select page: 2, address: 2E, and set data: 00.
- 9) Select page: 0, address: 01, and set data: 00.

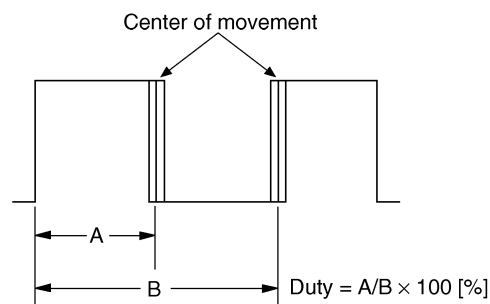


Fig. 5-3-8

3-4. VIDEO SYSTEM ADJUSTMENTS

3-4-1. Video System Adjustments

Adjusting Procedure:

1. 27 MHz/36 MHz origin oscillation adjustment
2. Chroma BPF f_0 adjustment
3. S VIDEO OUT Y Level Adjustment
4. S VIDEO OUT chroma level adjustment
5. VIDEO OUT Y, chroma level check
6. Hi8/standard 8 mm AFC f_0 adjustment

1. 27 MHz/36 MHz Origin Oscillation Adjustment (VC-235 board)

Set the oscillation frequency of X1501.

If deviated, the synchronization will be disrupted and the color will become inconsistent.

Note: 27 MHz 720H model

36 MHz 960H model

720H model: DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720

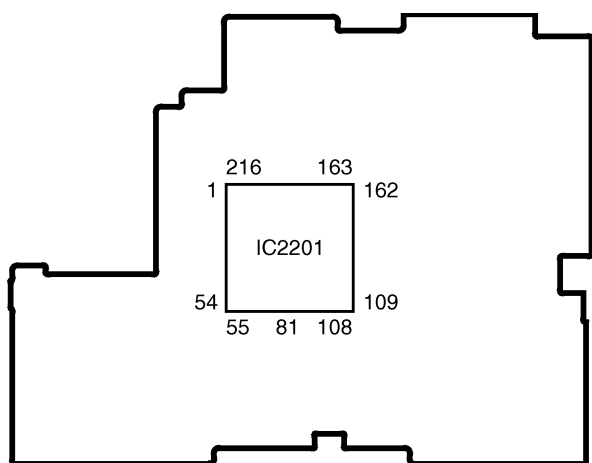
960H model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

| | |
|----------------------|--------------------------------|
| Mode | Camera |
| Measurement Point | Pin ⑧ of IC2201 |
| Measuring Instrument | Frequency counter |
| Adjustment Page | F |
| Adjustment Address | 4D |
| Specified Value | $f=13500000 \pm 68 \text{ Hz}$ |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: F, address: 4D, change the data and set the clock frequency(f) to the specified value.
- 3) Press the PAUSE button of the adjustment remote commander.
- 4) Select page: 0, address: 01, and set data: 00.

VC-235 BOARD



2. Chroma BPF f_0 Adjustment (VC-235 board)

Set the center frequency of IC3701 chroma band-pass filter.

| | |
|----------------------|---|
| Mode | VTR stop |
| Signal | No signal |
| Measurement Point | CH1: Chroma signal terminal of S VIDEO jack (75 Ω terminated) CH2: Y signal terminal of S VIDEO jack (75 Ω terminated) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | C |
| Adjustment Address | 28 |
| Specified Value | A = 100 mVp-p or less B = 200 mVp-p or more |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
- 3) Check that the burst signal (B) is output to the chroma signal terminal of S VIDEO jack.
- 4) Select page: 3, address: 0C, set data: 04, and press the PAUSE button.
- 5) Select page: C, address: 28, and change the data for minimum amplitude of the burst signal level (A).
(The data of address: 28, should be "00" to "07")
- 6) Press the PAUSE button.
- 7) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
- 8) Check that the burst signal level (B) satisfies the specified value.
- 9) Select page: D, address: 11, set data: 00, and press the PAUSE button.
- 10) Select page: 0, address: 01, and set data: 00.

When the data of page: 3, address: 0C, is 04:

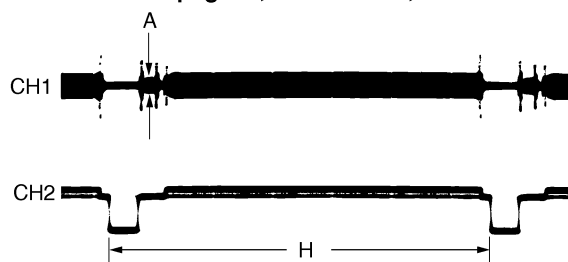


Fig. 5-3-9

When the data of page: 3, address: 0C, is 00:

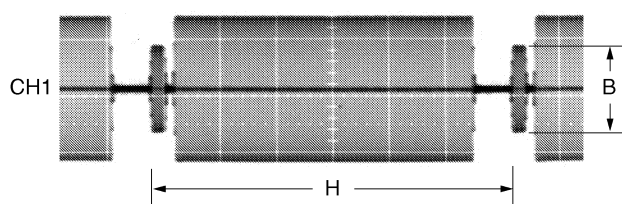


Fig. 5-3-10

3. S VIDEO OUT Y Level Adjustment (VC-235 board)

| | |
|----------------------|--|
| Mode | VTR stop |
| Subject | Arbitrary |
| Measurement Point | Y signal terminal of S VIDEO jack (75 Ω terminated) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | C |
| Adjustment Address | 25 |
| Specified Value | $A = 1000 \pm 20$ mV |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 3, address: 0C, set data: 02, and press the PAUSE button.
- 4) Select page: C, address: 25, change the data and set the Y signal level (A) to the specified value.
- 5) Press the PAUSE button.
- 6) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
- 7) Select page: D, address: 11, set data: 00, and press the PAUSE button.
- 8) Select page: 0, address: 01, and set data: 00.

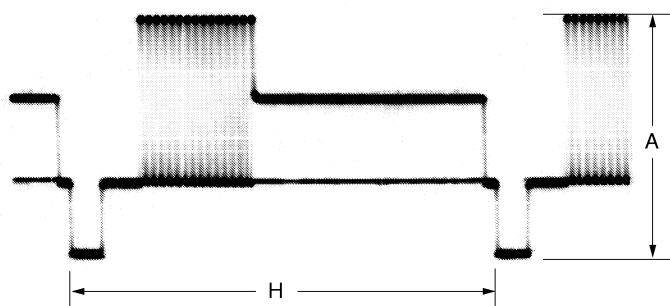


Fig. 5-3-11

4. S VIDEO OUT Chroma Level Adjustment (VC-235 board)

| | |
|----------------------|--|
| Mode | VTR stop |
| Subject | Arbitrary |
| Measurement Point | Chroma signal terminal of S VIDEO jack (75 Ω terminated) External trigger: Y signal terminal of S VIDEO jack |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | C |
| Adjustment Address | 26, 27 |
| Specified Value | Cr level: $A=714 \pm 14$ mV (NTSC) $A=700 \pm 14$ mV (PAL) Cb level: $B=714 \pm 14$ mV (NTSC) $B=700 \pm 14$ mV (PAL) Burst level: $C=286 \pm 6$ mV (NTSC) $C=300 \pm 6$ mV (PAL) |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 3, address: 0C, set data: 02, and press the PAUSE button.
- 4) Select page: C, address: 26, change the data and set the Cr signal level (A) to the specified value.
- 5) Press the PAUSE button.
- 6) Select page: C, address: 27, change the data and set the Cb signal level (B) to the specified value.
- 7) Press the PAUSE button.
- 8) Check that the burst signal level (C) is satisfied the specified value.
- 9) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
- 10) Select page: D, address: 11, set data: 00, and press the PAUSE button.
- 11) Select page: 0, address: 01, and set data: 00.

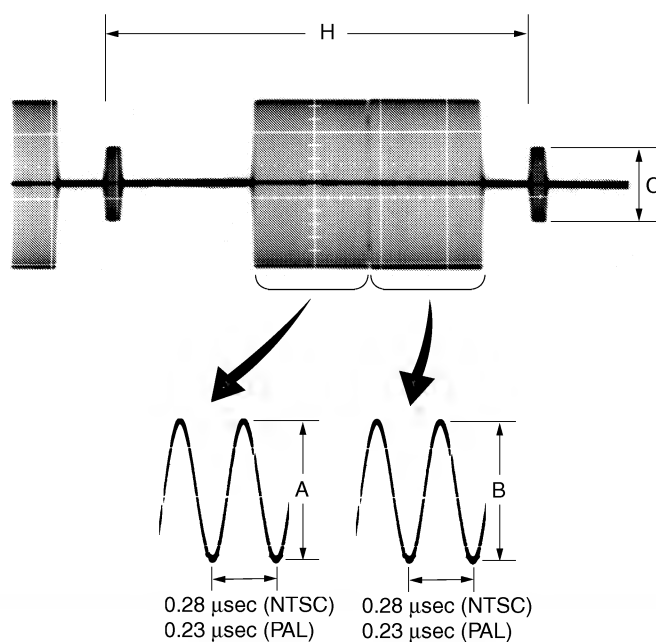


Fig. 5-3-12

5. VIDEO OUT Y, Chroma Level Check (VC-235 board)

| | |
|----------------------|---|
| Mode | VTR stop |
| Subject | Arbitrary |
| Measurement Point | VIDEO jack (75 Ω terminated) |
| Measuring Instrument | Oscilloscope |
| Specified Value | Sync level: A=286 \pm 18 mV (NTSC) A=307 \pm 18 mV (PAL) Burst level: B=286 \pm 18 mV (NTSC) B=300 \pm 18 mV (PAL) |

Adjusting method:

- 1) Select page: 0, address: 01, set data: 01.
- 2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 3, address: 0C, set data: 02, and press the PAUSE button.
- 4) Check that the sync signal level (A) satisfies the specified value.
- 5) Check that the burst signal level (B) satisfies the specified value.
- 6) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
- 7) Select page: D, address: 11, set data: 00, and press the PAUSE button.
- 8) Select page: 0, address: 01, set data: 00.

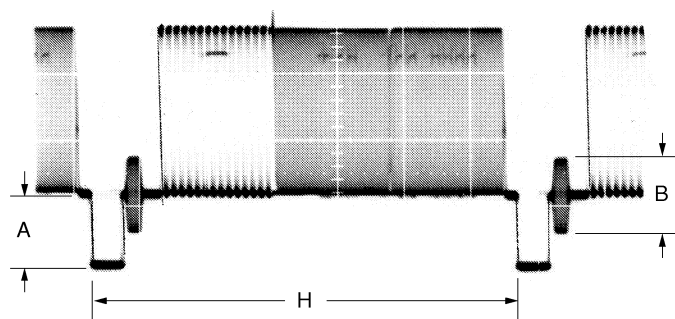


Fig. 5-3-13

6. Hi8/standard 8 mm AFC f₀ Adjustment (VC-235 board) (Using Digital Voltmeter)

Adjust the pull-in range of the clock generator (IC2201) for A/D conversion during Hi8/standard 8 mm playback.

| | |
|----------------------|--------------------------|
| Mode | VTR stop |
| Signal | No signal |
| Measurement Point | Pin ② of CN1108 (AFC F0) |
| Measuring Instrument | Digital voltmeter |
| Adjustment Page | F |
| Adjustment Address | 65 |
| Specified Value | A=2.00 \pm 0.05 Vdc |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 3, address: 0D, set data: 04, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 6, address: 63, set data: 04.
- 4) Select page: 6, address: 6F, set data: 01.
- 5) Select page: F, address: 65, change the data and set the DC voltage (A) to the specified value.
- 6) Press the PAUSE button.
- 7) Select page: 3, address: 0D, set data: 00, and press the PAUSE button.
- 8) Select page: 6, address: 63, set data: 00.
- 9) Select page: 6, address: 6F, set data: 00.
- 10) Select page: 0, address: 01, and set data: 00.

7. Hi8/standard 8 mm AFC f₀ Adjustment (VC-235 board) (Auto Adjustment)

Adjust the pull-in range of the clock generator (IC2201) for A/D conversion during Hi8/standard 8 mm playback.

| | |
|----------------------|--------------------------------------|
| Mode | VTR stop |
| Signal | No signal |
| Measurement Point | Display data of Page: 6, Address: 6E |
| Measuring Instrument | Adjustment remote commander |
| Adjustment Page | F |
| Adjustment Address | 65 |
| Specified Value | B2 to BA |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 3, address: 0D, set data: 04, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: 6, address: 63, set data: 04.
- 4) Select page: 6, address: 6F, set data: 01.
- 5) Select page: 6, address: 01, set data: C5, and press the PAUSE button.
- 6) Select page: 6, address: 02, and check that the data is "01".
- 7) Select page: 6, address: 6E, and check that the display data satisfies the specified value.
- 8) Select page: 3, address: 0D, set data: 00, and press the PAUSE button.
- 9) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
- 10) Select page: 6, address: 63, set data: 00.
- 11) Select page: 6, address: 6F, set data: 00.
- 12) Select page: 0, address: 01, and set data: 00.

3-5. IR TRANSMITTER ADJUSTMENTS

Adjust using a IR receiver jig (J-6082-383-A).

Switch setting:

LASER LINK ON (Red LED is lit)

1. IR Video Carrier Frequency Adjustment (MI-37 board)

| | |
|----------------------|---|
| Mode | VTR stop |
| Signal | No signal |
| Measurement Point | Pin ⑤ of CN003 of IR receiver jig (RF) |
| Measuring Instrument | Frequency counter |
| Adjustment Page | F |
| Adjustment Address | 80 |
| Specified Value | f=11.85 ± 0.05 MHz (NTSC model) f=11.55 ± 0.05 MHz (PAL model) |

Note: NTSC model: DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720
PAL model: DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E

Connection of Equipment

Connect the measuring device as shown in the following figure, and adjust.

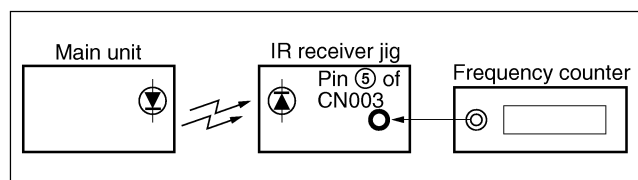


Fig. 5-3-14

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 3, address: 0C, set data: 08, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: F, address: 80, change the data, and set the video carrier frequency (f) to the specified value.
- 4) Press the PAUSE button.
- 5) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
- 6) Select page: 0, address: 01, and set data: 00.

2. IR Video Deviation Adjustment (MI-37 board)

| | |
|----------------------|--|
| Mode | VTR stop |
| Signal | No signal |
| Measurement Point | VIDEO OUT terminal of IR receiver jig (Terminated at 75 Ω) |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | F |
| Adjustment Address | 7E |
| Specified Value | A=0.82 ± 0.05 V |

Connection of Equipment

Connect the measuring device as shown in the following figure, and adjust.

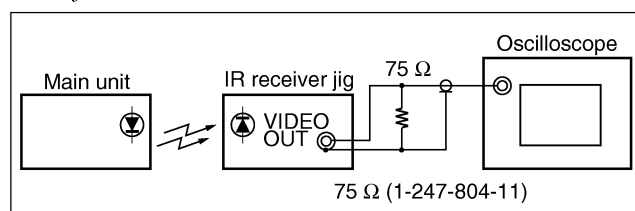


Fig. 5-3-15

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 3, address: 0C, set data: 01, and press the PAUSE button of the adjustment remote commander.
- 3) Select page: F, address: 7E, and change the data, set the video signal amplitude (A) to the specified value.
- 4) Press the PAUSE button.
- 5) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
- 6) Select page: 0, address: 01, and set data: 00.

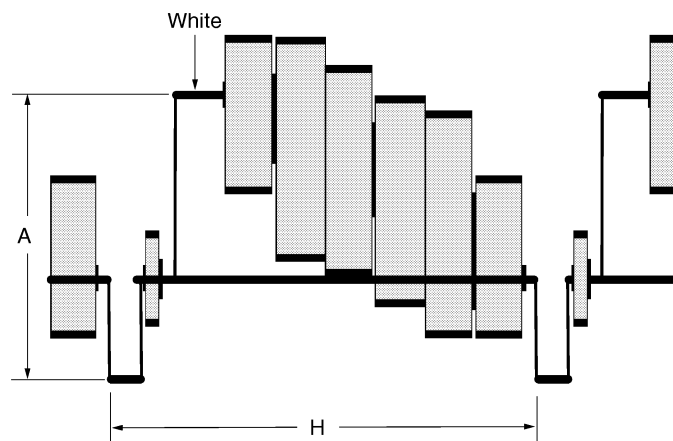


Fig. 5-3-16

3. IR Audio Deviation Adjustment (MI-37 board)

| | |
|----------------------|---|
| Mode | VTR stop |
| Signal | Audio signal: 400 Hz, -7.5 dBs: Audio left and right terminal of A/V jack Video signal: Color bar signal: VIDEO terminal of A/V jack |
| Measurement Point | AUDIO L terminal and AUDIO R terminal of IR receiver jig (Terminated at 47 kΩ) |
| Measuring Instrument | Audio level meter |
| Adjustment Page | F |
| Adjustment Address | 7F |
| Specified Value | Signal level: -7.5 ± 1.0 dBs Level difference of L and R: Below 2 dB |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Connect the audio level meter to the AUDIO L terminal of the IR receiver jig.
- 3) Select page: F, address: 7F, change the data and set the 400 Hz audio signal level to the specified value.
- 4) Press the PAUSE button.
- 5) Connect the audio level meter to the AUDIO R terminal of the IR receiver jig.
- 6) Check that the 400 Hz audio signal level is within the specified value. If outside, repeat from step 3).
- 7) Select page: 0, address: 01, and set data: 00.

Connection of Equipment

Connect the measuring device as shown in the following figure, and adjust.

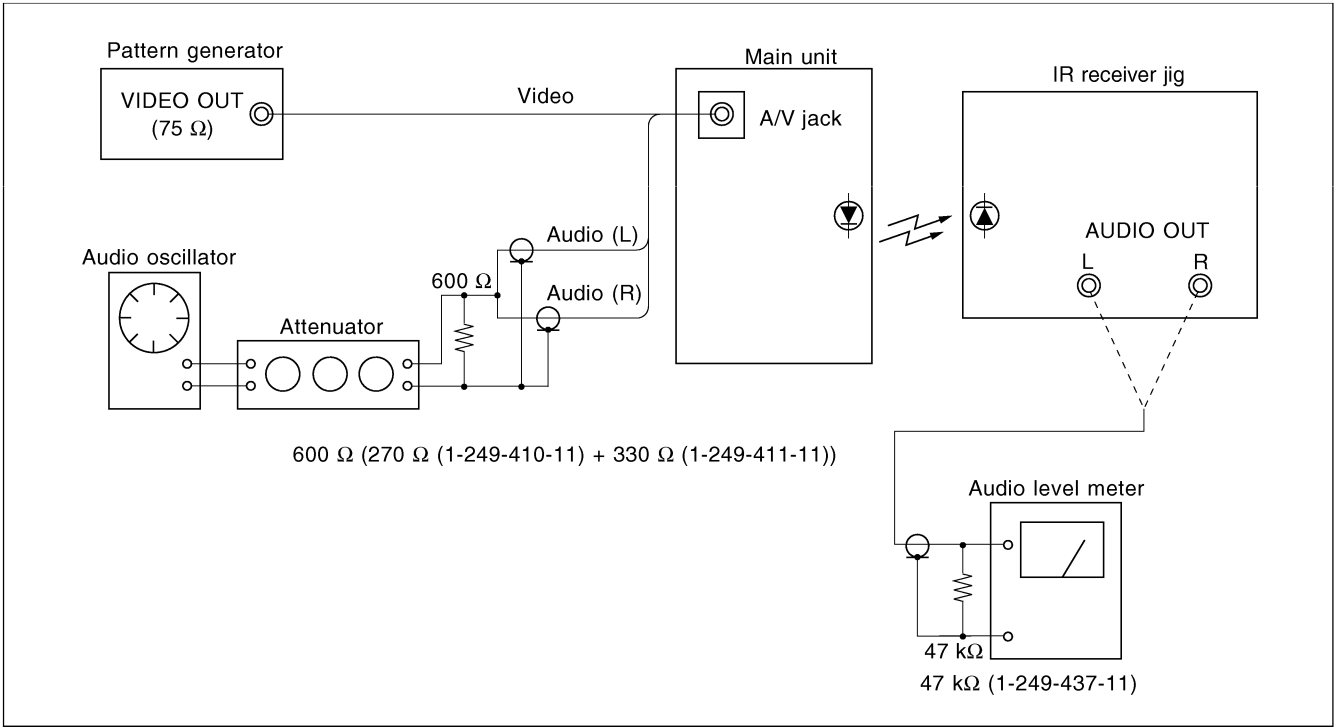


Fig. 5-3-17

3-6. AUDIO SYSTEM ADJUSTMENTS

[Connecting the measuring instruments for the audio]

Connect the audio system measuring instruments in addition to the video system measuring instruments as shown in Fig. 5-3-22.

[Adjustment Procedure]

- 1) Hi8/standard 8 mm AFM BPF f₀ adjustment
- 2) Hi8/standard 8 mm AFM 1.5 MHz deviation adjustment
- 3) Hi8/standard 8 mm AFM 1.7 MHz deviation adjustment
- 4) Digital8 playback level check
- 5) Overall level characteristics check
- 6) Overall distortion check
- 7) Overall noise level check
- 8) Overall separation check

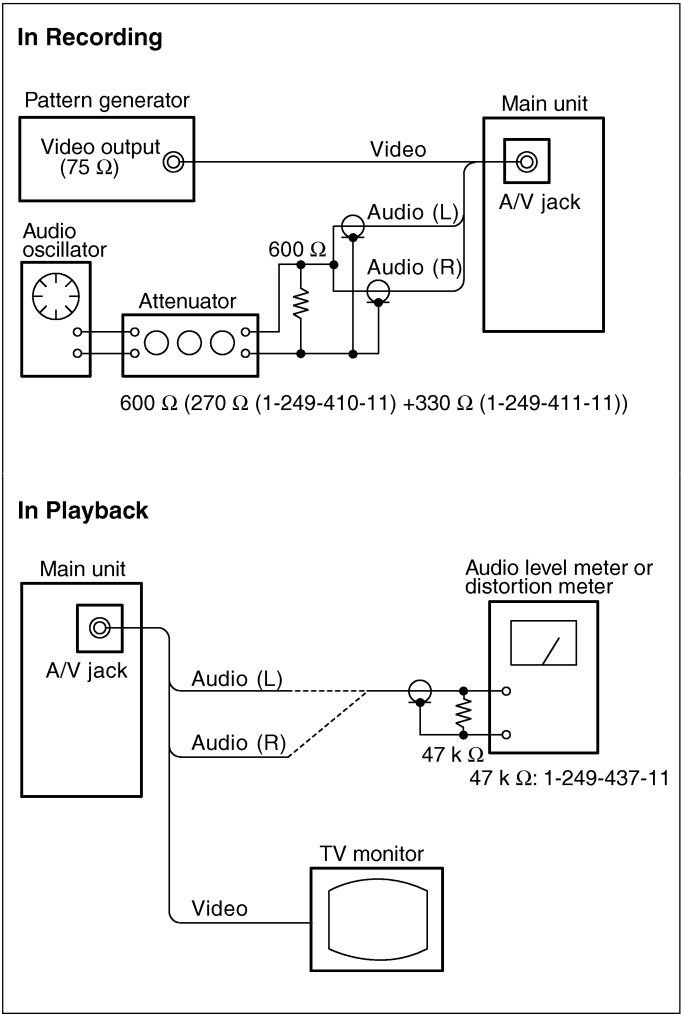


Fig. 5-3-18

1. Hi8/standard 8 mm AFM BPF f₀ Adjustment (VC-235 board)

Sets the BPF passing frequency of IC5701 so that the AFM signal can separate from the playback RF signal properly. If deviated, the mono/stereo mode will be differentiated incorrectly, and noises and distortions will increase during high volume playback.

| Mode | Playback |
|----------------------|--|
| Signal | Hi8/standard 8 mm alignment tape: For BPF adjustment (WR5-11NS (NTSC)) (WR5-11CS (PAL)) |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Distortion meter |
| Adjustment Page | F |
| Adjustment Address | 7D |
| Specified Value | The Main and Sub channel distortion rate should be almost the same (within ± 1%) and minimum. |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Set the Hi-Fi sound switch (menu display) to "2".
- 3) Select page: F, address: 7D, change the data and minimize the distortion rate.
- 4) Press the PAUSE button of the adjustment remote commander.
- 5) Set the Hi-Fi sound switch (menu display) to "1".
- 6) Select page: F, address: 7D, change the data and minimize the distortion rate.
- 7) Press the PAUSE button of the adjustment remote commander.
- 8) Repeat steps 2) to 7) and set the data of address: 7D so that the distortions rates when the Hi-Fi sound switch is set to "2" and set to "1" respectively are almost the same and minimum.
- 9) Press the PAUSE button of the adjustment remote commander.
- 10) Select page: 0, address: 01, and set data: 00.
- 11) Set the Hi-Fi sound switch to "STEREO".

2. Hi8/standard 8 mm AFM 1.5 MHz Deviation Adjustment (VC-235 board)

Adjust to the optimum 1.5 MHz audio FM signal deviation.
If the adjustment is not correct, its playback level will differ from that of other units.

| Mode | Playback |
|----------------------|--|
| Signal | Hi8/standard 8 mm alignment tape: For checking AFM stereo operation Monoscope section (WR5-9NS (NTSC)) (WR5-9CS (PAL)) |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Audio level meter |
| Adjustment Page | F |
| Adjustment Address | 7B |
| Specified Value | -7.5 ± 2.0 dBs |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Set the Hi-Fi sound switch (menu display) to "1".
- 3) Select page: F, address: 7B, change the data and set the 400 Hz signal level to the specified value.
- 4) Press the PAUSE button.
- 5) Set the Hi-Fi sound switch (menu display) to "STEREO".
- 6) Select page: 0, address: 01, and set data: 00.

3. Hi8/standard 8 mm AFM 1.7 MHz Deviation Adjustment (VC-235 board)

Adjust to the optimum 1.7 MHz audio FM signal deviation.
If improper, this causes deteriorated separation (with stereo signal).

| Mode | Playback |
|----------------------|--|
| Signal | Hi8/standard 8 mm alignment tape: For checking AFM stereo operation Monoscope section (WR5-9NS (NTSC)) (WR5-9CS (PAL)) |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Oscilloscope |
| Adjustment Page | F |
| Adjustment Address | 7C |
| Specified Value | -7.5 ± 2.0 dBs |

Adjusting method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Set the Hi-Fi sound switch (menu display) to "2".
- 3) Select page: F, address: 7C, change the data and set the 1 kHz signal level to the specified value.
- 4) Press the PAUSE button.
- 5) Set the Hi-Fi sound switch (menu display) to "STEREO".
- 6) Select page: 0, address: 01, and set data: 00.

4. Digital8 Playback Level Check

| Mode | VTR playback |
|----------------------|---|
| Signal | Digital8 alignment tape: For audio operation check (WR5-3ND (NTSC)) (WR5-3CD (PAL)) |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Audio level meter and frequency counter |
| Specified Value | 32 kHz mode: 1 kHz, $+3.0 \pm 2.0$ dBs 48 kHz mode: 1 kHz, $+3.0 \pm 2.0$ dBs 44.1 kHz mode: The 7.35 kHz signal level during EMP OFF is $+2.0 \pm 2.0$ dBs. The 7.35 kHz signal level during EMP ON is -6 ± 2 dB from the signal level during EMP OFF. |

Checking Method:

- 1) Check that the playback signal level is the specified value.

5. Overall Level Characteristics Check

| Mode | Camera recording and playback |
|----------------------|---|
| Signal | 400 Hz, -66 dBs signal: MIC jack left and right |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Audio level meter |
| Specified Value | -7.5 ± 3.0 dBs |

Checking Method:

- 1) Input the 400 Hz, -66 dBs signal in the MIC jack.
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the 400 Hz signal level is the specified value.

6. Overall Distortion Check

| Mode | Camera recording and playback |
|----------------------|---|
| Signal | 400 Hz, -66 dBs signal: MIC jack left and right |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Audio distortion meter |
| Specified Value | Below 0.4% (200 Hz to 6 kHz BPF ON) |

Checking Method:

- 1) Input the 400 Hz, -66 dBs signal in the MIC jack.
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the distortion is the specified value.

7. Overall Noise Level Check

| | |
|----------------------|---|
| Mode | Camera recording and playback |
| Signal | No signal: Insert a shorting plug in the MIC jack |
| Measurement Point | Audio left or right terminal of A/V jack |
| Measuring Instrument | Audio level meter |
| Specified Value | Below -45 dBs (IHF-A filter ON, 20 kHz LPF ON) |

Checking Method:

- 1) Insert a shorting plug in the MIC jack.
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the noise level is the specified value.

8. Overall Separation Check

| | |
|----------------------|---|
| Mode | Camera recording and playback |
| Signal | 400 Hz, -66 dBs signal: MIC jack <right> [left] (Connect the MIC jack <left> [right] to GND) |
| Measurement Point | Audio <left> [right] terminal of A/V jack |
| Measuring Instrument | Audio level meter |
| Specified Value | Below -40 dBs |

< > : Left channel check

[] : Right channel check

Checking Method:

- 1) Input the 400 Hz, -66 dBs signal in the <right> [left] terminal of the MIC jack only.
- 2) Record in the camera mode.
- 3) Playback the recorded section.
- 4) Check that the signal level of the audio output <left> [right] terminal is the specified value.

5-4. SERVICE MODE

4-1. ADJUSTMENT REMOTE COMMANDER

The adjustment remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjustment remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Using the Adjustment Remote Commander

- 1) Connect the adjustment remote commander to the LANC terminal.
- 2) Set the HOLD switch of the adjustment remote commander to “HOLD” (SERVICE position). If it has been properly connected, the LCD on the adjustment remote commander will display as shown in Fig. 5-4-1.

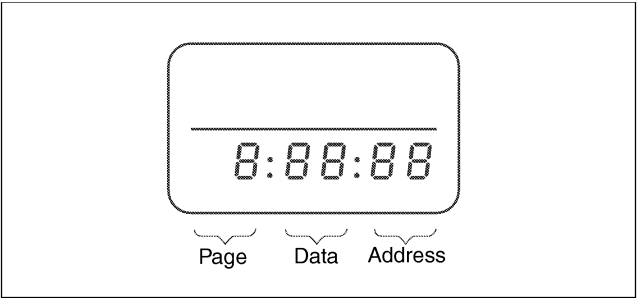


Fig. 5-4-1

- 3) Operate the adjustment remote commander as follows.
 - Changing the page
The page increases when the EDIT SEARCH+ button is pressed, and decreases when the EDIT SEARCH- button is pressed. There are altogether 16 pages, from 0 to F.

| | |
|-----------------------------------|---------------------------------------|
| Hexadecimal notation | 0 1 2 3 4 5 6 7 8 9 A B C D E F |
| LCD Display | 0 1 2 3 4 5 6 7 8 9 A b c d E F |
| Decimal notation conversion value | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |

- Changing the address
The address increases when the FF (▶▶) button is pressed, and decreases when the REW (◀◀) button is pressed. There are altogether 256 addresses, from 00 to FF.
 - Changing the data (Data setting)
The data increases when the PLAY (▶) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
 - Writing the adjustment data
The PAUSE button must be pressed to write the adjustment data (7, 8, C, D, E, F page) in the nonvolatile memory. (The new adjusting data will not be recorded in the nonvolatile memory if this step is not performed)
- 4) After completing all adjustments, turn off the main power supply (8.4 V) once.

2. Precautions Upon Using the Adjustment Remote Commander

Mishandling of the adjustment remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

4-2. DATA PROCESS

The calculation of the DDS display and the adjustment remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Indicates the hexadecimal-decimal conversion table.

Hexadecimal-decimal Conversion Table

②

| Lower digit of hexadecimal Upper digit of hexadecimal | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A (H) | B (h) | C (c) | D (d) | E (E) | F (F) |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|----------|----------|----------|----------|----------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| 2 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| 3 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| 4 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 77 | 76 | 77 | 78 | 79 |
| 5 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 |
| 6 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 |
| 7 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 |
| 8 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 |
| 9 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 |
| A (H) | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 |
| ① B (h) | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 |
| C (c) | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 |
| D (d) | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 |
| E (E) | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 |
| F (F) | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 |

Note:

The characters shown in the parenthesis () shown the display on the adjustment remote commander.

(Example)

If the DDS display or the adjustment remote commander shows BD (h d);

Because the upper digit of the adjustment number is B (h), and the lower digit is D (d), the meeting point “189” of ① and ② in the above table is the corresponding decimal number.

Table 5-4-1

4-3. SERVICE MODE

Additional note on adjustment

Note: After the completion of the all adjustments, cancel the service mode by either of the following ways.

- 1) After data on page: D and F is restored, unplug the main power supply and remove the coin lithium battery. (In this case, date and time and menu setting have been set by users are canceled. Perform resetting)
- 2) After data on page: D and F is restored, select page: 0, address: 01, and return the data to 00. And when data on page: 2 and 3 are changed, return data to the original condition.

1. Setting the Test Mode

| | |
|--------|------------|
| Page F | Address 22 |
|--------|------------|

| Data | Function |
|------|---|
| 80 | Normal |
| 81 | Test mode Various emergency prohibitions and releases Drum emergency, capstan emergency, loading motor emergency, reel emergency, tape top and end, DEW detection |

| | |
|--------|------------|
| Page D | Address 10 |
|--------|------------|

| Data | Function |
|------|------------------------------|
| 00 | Normal |
| 01 | Forced camera power ON |
| 02 | Forced VTR power ON |
| 03 | Forced camera + VTR power ON |
| 05 | Forced memory power ON |

- Before setting the data, select page: 0, address: 01, and set data: 01.
- For page D and F, the data set will be recorded in the non-volatile memory by pressing the PAUSE button of the adjustment remote commander. In this case, take note that the test mode will not be exited even when the main power is turned off (8.4 Vdc).
- After completing adjustments/repairs, be sure to return the data of this address to 00, and press the PAUSE button of the adjustment remote commander. And select page: 0, address: 01, and set data: 00.

2. Emergence Memory Address

2-1. C Page Emergence Memory Address

| | |
|--------|------------------|
| Page C | Address F4 to FF |
|--------|------------------|

| Address | Contents |
|---------|--|
| F4 | EMG code when first error occurs |
| F6 | Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs |
| F7 | Lower: MSW code to be moved when first error occurs |
| F8 | EMG code when second error occurs |
| FA | Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs |
| FB | Lower: MSW code to be moved when second error occurs |
| FC | EMG code when last error occurs |
| FE | Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs |
| FF | Lower: MSW code to be moved when last error occurs |

When no error occurs in this unit, data "00" is written in the above addresses (F4 to FF). when first error occurs in the unit, the data corresponding to the error is written in the first emergency address (F4 to F7). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (F8 to FB).

Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (FC to FF).

Note: After completing adjustments, be sure to initialize the data of addresses F4 to FF to "00".

Initializing method:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: C, address: F4, set data: 00, and press the PAUSE button.
- 3) Select address: F5 to FF and set data "00" into them in the same way as address: F4.
- 4) Select page: 0, address: 01, and set data: 00.

2-2. F Page Emergency Memory Address

Note 1: Emergence of PB mode only.

| | |
|--------|------------------|
| Page F | Address 10 to 1B |
|--------|------------------|

| Address | Contents |
|---------|--|
| 10 | EMG code when first error occurs |
| 12 | Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs |
| 13 | Lower: MSW code to be moved when first error occurs |
| 14 | EMG code when second error occurs |
| 16 | Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs |
| 17 | Lower: MSW code to be moved when second error occurs |
| 18 | EMG code when last error occurs |
| 1A | Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs |
| 1B | Lower: MSW code to be moved when last error occurs |

When no error occurs in this unit, data "00" is written in the above addresses (10 to 1B). when first error occurs in the unit, the data corresponding to the error is written in the first emergency address (10 to 13). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (14 to 17).

Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (18 to 1B).

Note 2: After completing adjustments, be sure to initialize the data of addresses 10 to 1B to "00".

Initializing method:

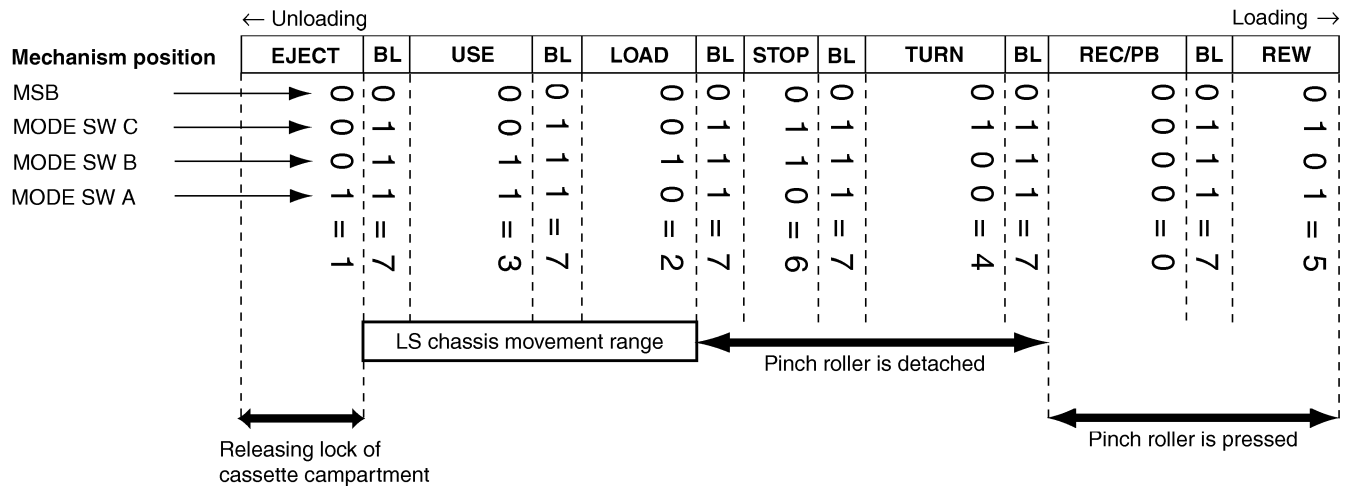
- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: F, address: 10, set data: 00, and press the PAUSE button.
- 3) Select address: 11 to 1B and set data "00" into them in the same way as in address: 10.
- 4) Select page: 0, address: 01, and set data: 00.

2-3. EMG Code (Emergency Code)

Codes corresponding to the errors which occur are written in C page, addresses F4, F8 and FC (or F page, addresses 10, 14 and 18). The type of error indicated by the code are shown in the following table.

| Code | Emergency Type |
|------|--|
| 00 | No error |
| 10 | Loading motor emergency during loading |
| 11 | Loading motor emergency during unloading |
| 22 | T reel emergency during normal rotation |
| 23 | S reel emergency during normal rotation |
| 24 | T reel emergency (Short circuit between S reel terminal and T reel terminal) |
| 30 | FG emergency at the start up of the capstan |
| 40 | FG emergency at the start up of the drum |
| 42 | FG emergency during normal rotation of the drum |

- The lower parts of the data of C page, addresses F6, FA and FE (or F page, addresses 12, 16 and 1A) represent the MSW codes (mode switch mechanism position) when errors occurs.
- The upper parts of the data of C page, addresses F6, FA and FE (or F page, addresses 12, 16 and 1A) represent, when the mechanism position is to be moved, the MSW codes at the start movement (when moving the loading motor).
- The lower parts of the data of C page, addresses F7, FB and FF (or F page, addresses 13, 17 and 1B) represent the MSW codes of the desired movement when the mechanism position is to be moved.

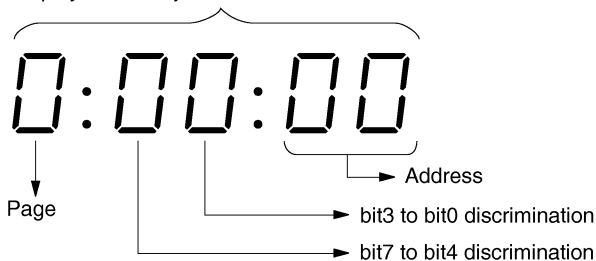


| Mechanism Position | MSW Code | Contents |
|--------------------|----------|--|
| EJECT | 1 | Position at which the cassette compartment lock is released. The mechanism will not move any further in the unloading direction. |
| BL | 7 | BLANC code. Between two codes. The mechanism will not be stopped by this code while it is operating. |
| USE | 3 | EJECT completion position. When the cassette is ejected, the mechanism will stop at this position. |
| LOAD | 2 | Code during loading/unloading. Code that is used while the LS chassis is moving. |
| STOP | 6 | Normal stop position. The pinch roller separates, the tension regulator returns, and the brakes of both reels turn on. |
| TURN | 4 | Position at which is used when the pendulum gear swings from S to T or from T to S. |
| REC/PB | 0 | PB, REC, CUE, REV, PAUSE, FF positions. The pinch roller is pressed and tension regulator is on. |
| REW | 5 | REW position. REW are carried at this position. The mechanism will not move any further in the loading direction. |

3. Bit Value Discrimination

Bit values must be discriminated using the display data of the adjustment remote commander for the following items. Use the table below to discriminate if the bit value is "1" or "0".

Display on the adjustment remote commander



(Example) If the remote commander display is "8E", bit value from bit 7 to bit 4 can be discriminated from the column ㉠, and those from bit 3 to bit 0 from column ㉡.

| Display on the adjustment remote commander | Bit values | | | |
|--|--------------|--------------|--------------|--------------|
| | bit3 or bit7 | bit2 or bit6 | bit1 or bit5 | bit0 or bit4 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 1 |
| 2 | 0 | 0 | 1 | 0 |
| 3 | 0 | 0 | 1 | 1 |
| 4 | 0 | 1 | 0 | 0 |
| 5 | 0 | 1 | 0 | 1 |
| 6 | 0 | 1 | 1 | 0 |
| 7 | 0 | 1 | 1 | 1 |
| ㉠ 8 | 1 | 0 | 0 | 0 |
| 9 | 1 | 0 | 0 | 1 |
| A (H) | 1 | 0 | 1 | 0 |
| B (h) | 1 | 0 | 1 | 1 |
| C (L) | 1 | 1 | 0 | 0 |
| D (d) | 1 | 1 | 0 | 1 |
| ㉡ E (E) | 1 | 1 | 1 | 0 |
| F (F) | 1 | 1 | 1 | 1 |

4. Input/output Check

| | |
|--------|------------|
| Page 2 | Address 49 |
|--------|------------|

| Bit | Function | When bit value = 1 | When bit value = 0 |
|-----|------------------|--------------------------|----------------------|
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | MIC jack | MIC jack is used | |
| 5 | | | |
| 6 | AUDIO/VIDEO jack | AUDIO/VIDEO jack is used | |
| 7 | S VIDEO jack | | S VIDEO jack is used |

Using method:

- 1) Select page: 2, address: 49.
- 2) By discriminating the bit value of display data, the state of the jack can be discriminated.

5. LED, LCD (Display Window) Check

| | | |
|--------|------------|------|
| Page 2 | Address 05 | Bit5 |
|--------|------------|------|

Using method:

- 1) Select page: 2, address: 05, and set the bit value of Bit5 to "1".
- 2) Check that all LED are lit and all segments of LCD (display window) are lit.
- 3) Select page: 2, address: 05, and set the bit value of Bit5 to "0".

6. Record of Use Check

| | |
|--------|------------------|
| Page 2 | Address A2 to AA |
|--------|------------------|

| Bit | Function | | Remarks |
|-----|--------------------|----------|--|
| A2 | Drum rotation | Hour (H) | 1000th place digit and 100th place digit of counted time (decimal digit) |
| A3 | counted time | Hour (L) | 10th place digit and 1st place digit of counted time (decimal digit) |
| A4 | (BCD code) | Minute | |
| A5 | User initial power | Year | After setting the clock, set the date of power on next |
| A6 | on date | Month | |
| A7 | (BCD code) | Day | |
| A8 | Final condensation | Year | |
| A9 | occurrence date | Month | |
| AA | (BCD code) | Day | |

Using method:

- 1) The record of use data is displayed at page: 2, addresses: A2 to AA.

Note 1: This data will be erased when the coin lithium battery (CF-69/70/72 board BH001) is removed (reset).

Note 2: 2.5 LCD model: DCR-TRV320/TRV320E/TRV320P
 3 LCD model: DCR-TRV420E/TRV525
 3.5 LCD model: DCR-TRV520/TRV520E/TRV520P/
 TRV620E
 4 LCD model: DCR-TRV720/TRV720E

| | |
|-----------------|----------|
| | CF board |
| 2.5 LCD model | CF-69 |
| 3/3.5 LCD model | CF-70 |
| 4 LCD model | CF-72 |

Note 3: When the drum was replaced, initialize the drum rotation counted time.

Initializing method of drum rotation counted time:

- 1) Select page: 0, address: 01, and set data: 01.
- 2) Select page: 2, address: A2, set data: 00, and press the PAUSE button.
- 3) Select address: A3 and A4 and set data "00" into them in the same way as in address: A2.
- 4) Select page: 0, address: 01, and set data: 00.

7. Switch Check (1)

| | |
|--------|------------|
| Page 2 | Address 43 |
|--------|------------|

| Bit | Function | When bit value = 1 | When bit value = 0 |
|-----|---------------------------------------|--------------------|--------------------|
| 0 | VTR MODE SW (SS-10000 block S001) | OFF | ON |
| 1 | CAM MODE SW (SS-10000 block S001) | OFF | ON |
| 2 | START/STOP SW (SS-10000 block S002) | OFF | ON |
| 3 | EJECT SW (FK-10000 block S012) | OFF | ON |
| 4 | CC DOWN SW (Mechanism chassis) | OFF (UP) | ON (DOWN) |
| 5 | PHOTO FREEZE SW (FK-10000 block S013) | OFF | ON |
| 6 | PHOTO MODE SW (SS-10000 block S001) | OFF | ON |
| 7 | | | |

Using method:

- 1) Select page: 2, address: 43.
- 2) By discriminating the bit value of display data, the state of the switches can be discriminated.

8. Switch Check (2)

| | |
|--------|------------------|
| Page 2 | Address 60 to 66 |
|--------|------------------|

Using method:

- 1) Select page: 2, address: 60 to 66.
- 2) By discriminating the display data, the pressed key can be discriminated.

| Address | Data | | | | | | | |
|------------------------------|---|---|---|--|--|--|---|--|
| | 00 to 0C | 0D to 24 | 25 to 3F | 40 to 5D | 5E to 81 | 82 to AA | AB to D7 | D8 to FF |
| 60 (KEY AD0) IC4801 ⑨③ | LASER AV LINK (FK-10000) block (S001) | STOP (FK-10000) block (S002) | FF (FK-10000) block (S003) | REC (FK-10000) block (S004, 005) | EDIT SEARCH (+) (FK-10000) block (S006) | EDIT SEARCH (-) (FK-10000) block (S007) | | No key input |
| 61 (KEY AD1) IC4801 ⑨④ | PHOTO START (FK-10000) block (S014) | PAUSE (FK-10000) block (S009) | REW (FK-10000) block (S010) | PLAY (FK-10000) block (S011) | | | | No key input |
| 62 (KEY AD2) IC4801 ⑨⑤ | DIGITAL EFFECT (CF-69/70/ 72 board (S001) | PICTURE EFFECT (CF-69/70/ 72 board (S003) | MENU (CF-69/70/ 72 board (S007) | TITLE (CF-69/70/ 72 board (S010) | PB ZOOM (CF-69/70/ 72 board (S014) | | | No key input |
| (KEY AD3) IC4801 ⑨⑥ | MEMORY + (CF-69/70/ 72 board (S002) | MEMORY - (CF-69/70/ 72 board (S004) | MEMORY INDEX (CF-69/70/ 72 board (S008) | MEMORY DELETE (CF-69/70/ 72 board (S011) | MEMORY PLAY (CF-69/70/ 72 board (S015) | MEMORY MIX (CF-69 board) (S018) (CF-70/72 board) (S019) | PANEL COLSE (PANEL OPEN/ CLOSE SWITCH) (S008) | PANEL OPEN (PANELOPEN/ CLOSE SWITCH) (S008) |
| 64 (KEY AD4) IC4801 ⑨⑦ | SUPER NIGHTSHOT (MF-10000) block (S002) | DATA CODE (CF-69/70/ 72 board (S005) | END SEARCH (CF-69/70/ 72 board (S009) | SELF TIMER (CF-69/70/ 72 board (S012) | DISPLAY (CF-69/70/ 72 board (S016) | FOCUS INFINITY (MF-10000) block (S001) | FOCUS AUTO (MF-10000) block (S001) | FOCUS MANUAL (MF-10000) block (S001) |
| 65 (KEY AD5) IC4801 ⑨⑧ | | | EXEC (CF-69/70 board) (S006) (KP-009 board) (S305) | EXPOSURE (CF-69/70 board) (S013) (KP-009 board) (S304) | PROGRAM AE (CF-69/70 board) (S017) (KP-009 board) (S303) | BACK LIGHT (CF-69 board) (S019) (CF-70 board) (S020) (KP-009 board) (S302) | FADER (CF-69 board) (S020) (CF-70 board) (S021) (KP-009 board) (S301) | No key input |
| 66 (KEY AD6) IC4801 ⑨⑨ | | LCD BRIGHT (+) (PD-117 board (S5701) (BV-10000) block (S001) | LCD BRIGHT (-) (PD-117 board (S5702) (BV-10000) block (S002) | VOLUME (+) (PD-117 board (S5703) (BV-10000) block (S003) | VOLUME (-) (PD-117 board (S5704) (BV-10000) block (S004) | PANEL REVERSE (PR-10000) block (S001) | | PANEL NORMAL (PR-10000) block (S001) |

Note: 2.5 LCD model: DCR-TRV320/TRV320E/TRV320P
3 LCD model: DCR-TRV420E/TRV525
3.5 LCD model: DCR-TRV520/TRV520E/TRV520P/
TRV620E
4 LCD model: DCR-TRV720/TRV720E

| | CF board | KP board | PD board | BV block |
|-----------------|----------|----------|----------|----------|
| 2.5 LCD model | CF-69 | — | PD-117 | — |
| 3/3.5 LCD model | CF-70 | — | PD-118 | BV-10000 |
| 4 LCD model | CF-72 | KP-009 | PD-118 | BV-10000 |

9. Headphone Jack Check

| | |
|--------|------------|
| Page 3 | Address 5A |
|--------|------------|

| Bit | Function | When bit value = 1 | When bit value = 0 |
|-----|----------------|------------------------|--------------------|
| 2 | Headphone jack | Headphone jack is used | |

Using method:

- 1) Select page: 3, address: 5A.
- 2) By discriminating the bit value of display data, the state of the headphone jack can be discriminated.

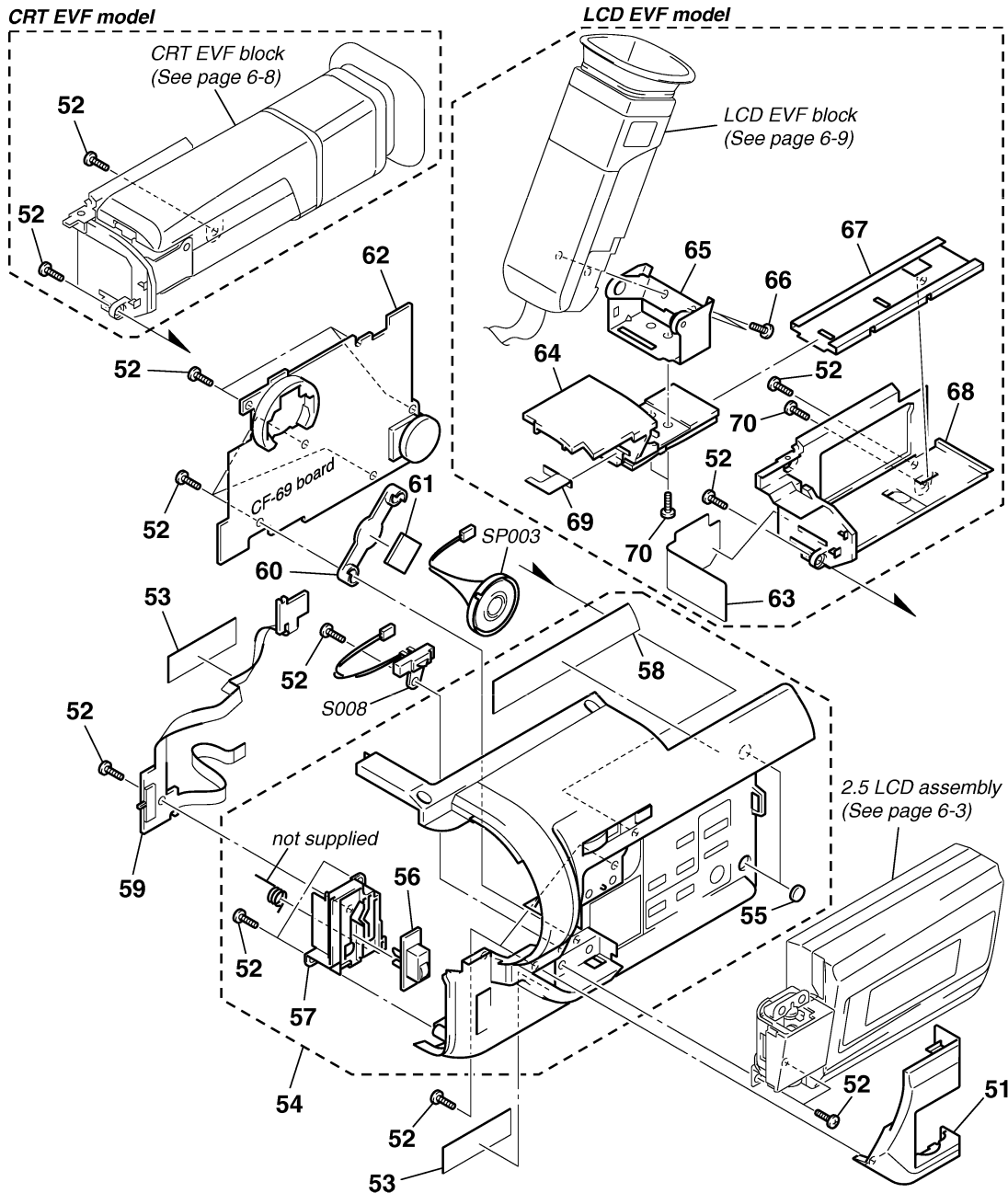
REPAIR PARTS LIST

6-1

6-1-2. CABINET (R) SECTION (2.5 LCD model) (TRV320/TRV320E/TRV320P)

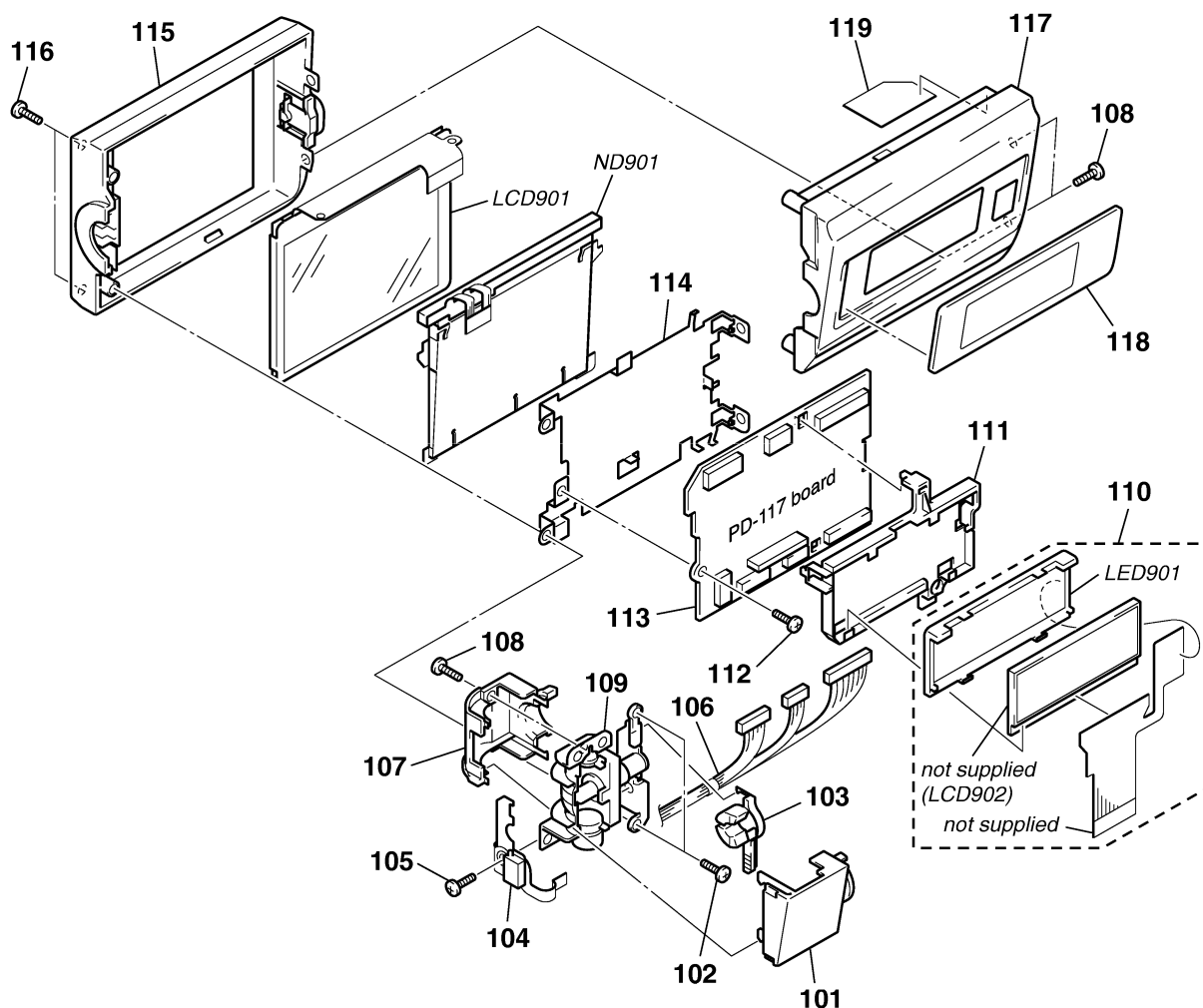
CRT EVF model: DCR-TRV320/TRV320E: E, HK, AUS, CN/TRV320P

LCD EVF model: DCR-TRV320E: AEP, UK, EE, NE, RU



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|----------|--------------|--|--------|
| 51 | 3-058-670-01 | COVER (R) (101), HINGE (TRV320/TRV320P) | | * 63 | 3-058-641-01 | GUIDE (100), HARNESS (TRV320E: AEP, UK, EE, NE, RU) | |
| 51 | 3-058-670-11 | COVER (R) (101), HINGE (TRV320E) | | 64 | X-3950-231-1 | BASE (100) ASSY, VF (TRV320E: AEP, UK, EE, NE, RU) | |
| 52 | 3-948-339-61 | TAPPING | | 65 | X-3950-230-1 | HINGE ASSY, VF (TRV320: AEP, UK, EE, NE, RU) | |
| 53 | 3-941-343-21 | TAPE (A) | | 66 | 3-948-339-81 | TAPPING | |
| 54 | X-3950-249-1 | CABINET (R) (101M) ASSY | | * 67 | 3-058-639-01 | SHEET METAL (100), SLIDE (TRV320E: AEP, UK, EE, NE, RU) | |
| 55 | 3-959-978-02 | CUSHION, PANEL | | 68 | X-3950-229-1 | BASE (100) ASSY, SLIDE (TRV320E: AEP, UK, EE, NE, RU) | |
| 56 | 3-058-698-01 | KNOB (100), MF | | * 69 | 3-058-640-01 | RETAINER (100), HARNESS (TRV320E: AEP, UK, EE, NE, RU) | |
| 57 | 3-058-697-01 | RETAINER (100), MF | | 70 | 3-968-729-01 | SCREW (2X4) | |
| * 58 | 3-059-650-01 | BLIND (B) (101), VF | | S008 | 1-771-848-11 | SWITCH, PUSH (PANEL OPEN/CLOSE) | |
| 59 | 1-418-801-11 | SWITCH BLOCK, CONTROL (MF-10000) | | SP003 | 1-529-590-11 | SPEAKER (2.0cm) | |
| * 60 | 3-058-659-01 | RETAINER (101), SPEAKER | | | | | |
| * 61 | 3-058-658-01 | SPACER (101), SPEAKER | | | | | |
| 62 | A-7074-327-A | CF-69 BOARD, COMPLETE (TRV320/TRV320E: E, HK, AUS, CN/TRV320P) | | | | | |
| 62 | A-7074-350-A | CF-69 BOARD, COMPLETE (TRV320E: AEP, UK, EE, NE, RU) | | | | | |

6-1-3. 2.5 LCD ASSEMBLY SECTION (TRV320/TRV320E/TRV320P)



(Note) About PD-117 board and LCD module, discriminate LCD type on the machine referring to page 9, and replace the same type.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

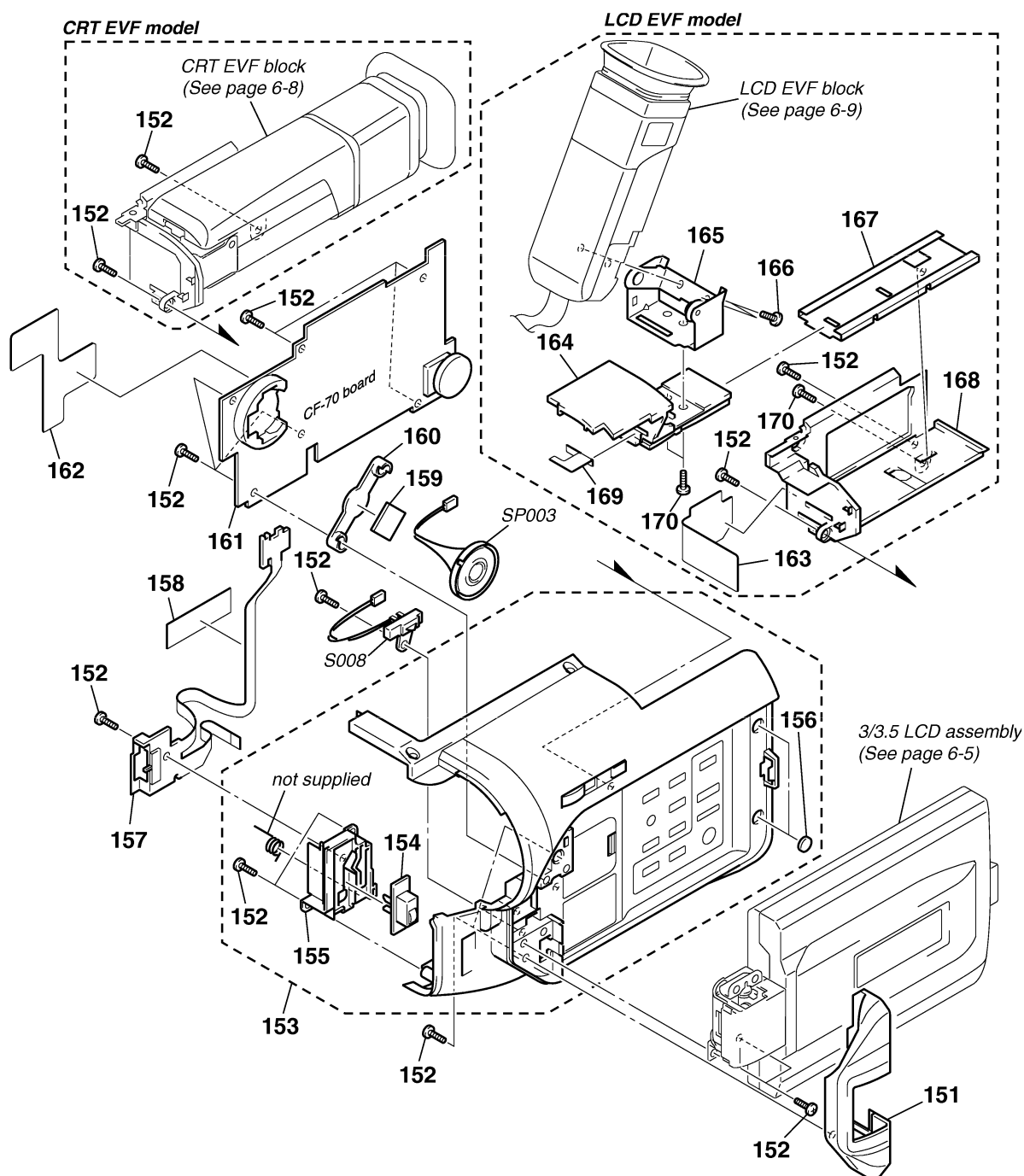
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|--|--------|-----------------|--------------|---|--------|
| 101 | 3-058-671-01 | COVER (C) (101), HINGE | | 114 | 3-058-666-01 | FRAME (101), PANEL | |
| 102 | 3-948-339-31 | SCREW, TAPPING | | 115 | X-3950-236-1 | CABINET (M) (101) ASSY, P | |
| * 103 | 3-058-672-01 | CLAMP, HARNESS | | 116 | 3-948-339-81 | TAPPING | |
| 104 | 1-418-802-11 | SWITCH BLOCK, PANEL REVERSE (PR-10000) | | 117 | 3-058-665-01 | CABINET (C) (101), P | |
| 105 | 4-981-286-01 | SCREW (M1.7X2) (IB LOCK) | | 118 | 3-058-668-41 | WINDOW (101), LCD (TRV320/TRV320P) | |
| 106 | 1-960-225-11 | HARNESS (DP-83) | | 118 | 3-058-668-51 | WINDOW (101), LCD (TRV320E) | |
| 107 | 3-058-673-01 | COVER (M), HINGE | | * 119 | 3-061-970-01 | SHEET (101), ELECTROSTATIC | |
| 108 | 3-968-729-01 | SCREW (2X4) | | LCD901 | 1-803-852-21 | INDICATOR MODULE, LIQUID CRYSTAL (2.5 LCD TYPE S 61K) (Note) | |
| 109 | X-3950-237-1 | HINGE ASSY | | LCD901 | 1-803-853-21 | INDICATOR MODULE, LIQUID CRYSTAL (2.5 LCD TYPE S 123K) (Note) | |
| 110 | A-7094-826-A | INDICATION (LCD) BLOCK ASSY (SERVICE) | | LCD901 | 1-803-859-31 | INDICATOR MODULE, LIQUID CRYSTAL (2.5 LCD TYPE C 61K) (Note) | |
| 111 | 3-058-667-01 | HOLDER (101), LCD | | Δ LED901 | 1-517-866-11 | LIGHT, BACK | |
| 112 | 3-713-786-21 | SCREW (M2X3) | | Δ ND901 | 1-517-751-11 | TUBE, FLUORESCENT, COLD CATHODE (TRV320/TRV320E: E, HK, AUS, CN/TRV320P) | |
| 113 | A-7074-272-A | PD-117 BOARD, COMPLETE (2.5 LCD TYPE S 61K) (Note) | | Δ ND901 | 1-517-751-21 | TUBE, FLUORESCENT, COLD CATHODE (TRV320E: AEP, UK, EE, NE, RU) | |
| 113 | A-7074-280-A | PD-117 BOARD, COMPLETE (2.5 LCD TYPE S 123K) (Note) | | | | | |
| 113 | A-7074-290-A | PD-117 BOARD, COMPLETE (2.5 LCD TYPE C 61K) (Note) | | | | | |

6-1-4. CABINET (R) SECTION (3/3.5 LCD model) **(TRV420E/TRV520/TRV520E/TRV520P/TRV525/TRV620E)**

CRT EVF model: DCR-TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P

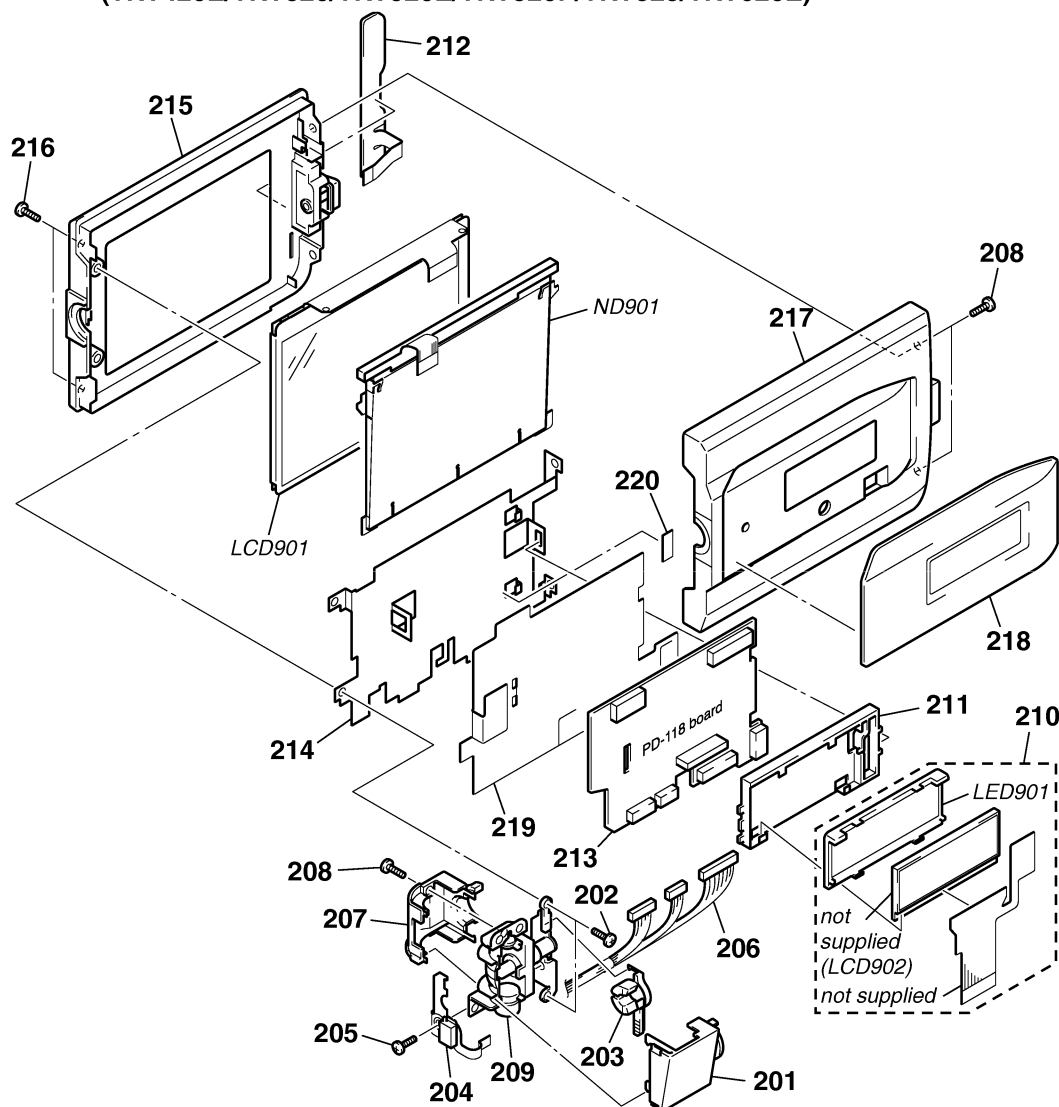
LCD EVF model: DCR-TRV420E: AEP/TRV520E: AEP/TRV525/TRV620E



| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| 151 | 3-058-721-01 | COVER (R (102)), HINGE | |
| 152 | 3-948-339-61 | TAPPING | |
| 153 | X-3950-239-1 | CABINET (R) (102) ASSY | |
| 154 | 3-058-705-01 | KNOB (102), MF | |
| 155 | 3-058-697-01 | RETAINER (100), MF | |
| 156 | 3-959-978-02 | CUSHION, PANEL | |
| 157 | 1-418-801-11 | SWITCH BLOCK, CONTROL (MF-10000) | |
| 158 | 3-941-343-21 | TAPE (A) | |
| * 159 | 3-058-658-01 | SPACER (101), SPEAKER | |
| * 160 | 3-058-659-01 | RETAINER (101), SPEAKER | |
| 161 | A-7074-344-A | CF-70 BOARD, COMPLETE (TRV420E: CN/ TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | |
| 161 | A-7074-373-A | CF-70 BOARD, COMPLETE (TRV420E: AEP/ TRV520E: AEP/TRV525/TRV620E) | |
| * 162 | 3-059-708-01 | SHEET (102), CF | |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| * 163 | 3-058-641-01 | GUIDE (100), HARNESS (TRV420E: AEP/ TRV520E: AEP/TRV525/TRV620E) | |
| 164 | X-3950-231-1 | BASE (100) ASSY, VF (TRV420E: AEP/ TRV520E: AEP/TRV525/TRV620E) | |
| 165 | X-3950-230-1 | HINGE ASSY, VF (TRV420E: AEP/TRV520E: AEP/TRV525/TRV620E) | |
| 166 | 3-948-339-81 | TAPPING | |
| * 167 | 3-058-639-01 | SHEET METAL (100), SLIDE (TRV420E: AEP/ TRV520E: AEP/TRV525/TRV620E) | |
| 168 | X-3950-229-1 | BASE (100) ASSY, SLIDE (TRV420E: AEP/ TRV520E: AEP/TRV525/TRV620E) | |
| * 169 | 3-058-640-01 | RETAINER (100), HARNESS (TRV420E: AEP/ TRV520E: AEP/TRV525/TRV620E) | |
| 170 | 3-968-729-01 | SCREW (2X4) | |
| S008 | 1-771-848-11 | SWITCH, PUSH (PANEL OPEN/CLOSE) | |
| SP003 | 1-529-590-11 | SPEAKER (2.0cm) | |

6-1-5. 3/3.5 LCD ASSEMBLY SECTION
(TRV420E/TRV520/TRV520E/TRV520P/TRV525/TRV620E)



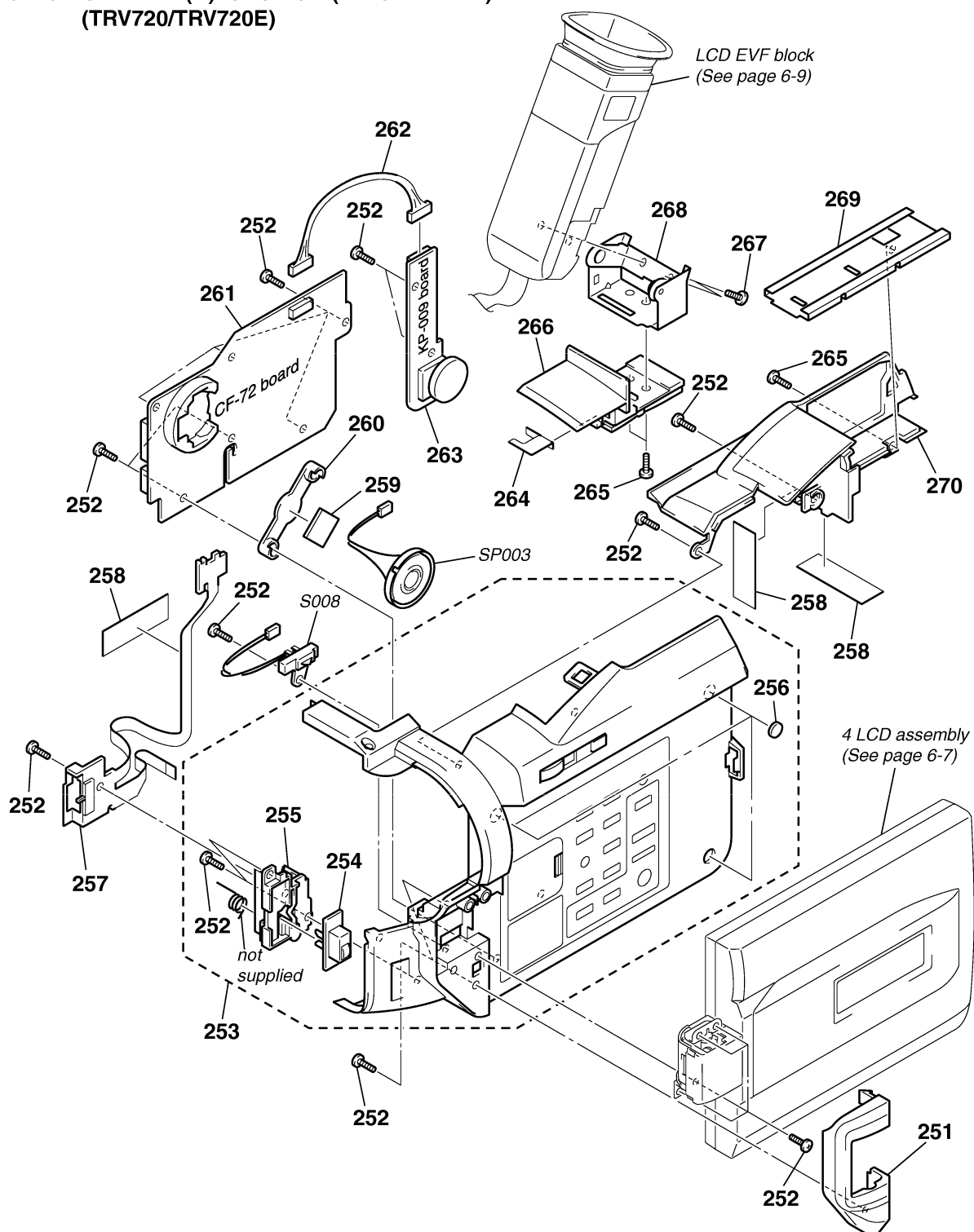
(Note) About PD-118 board and LCD module, discriminate LCD type on the machine referring to page 9, and replace the same type.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

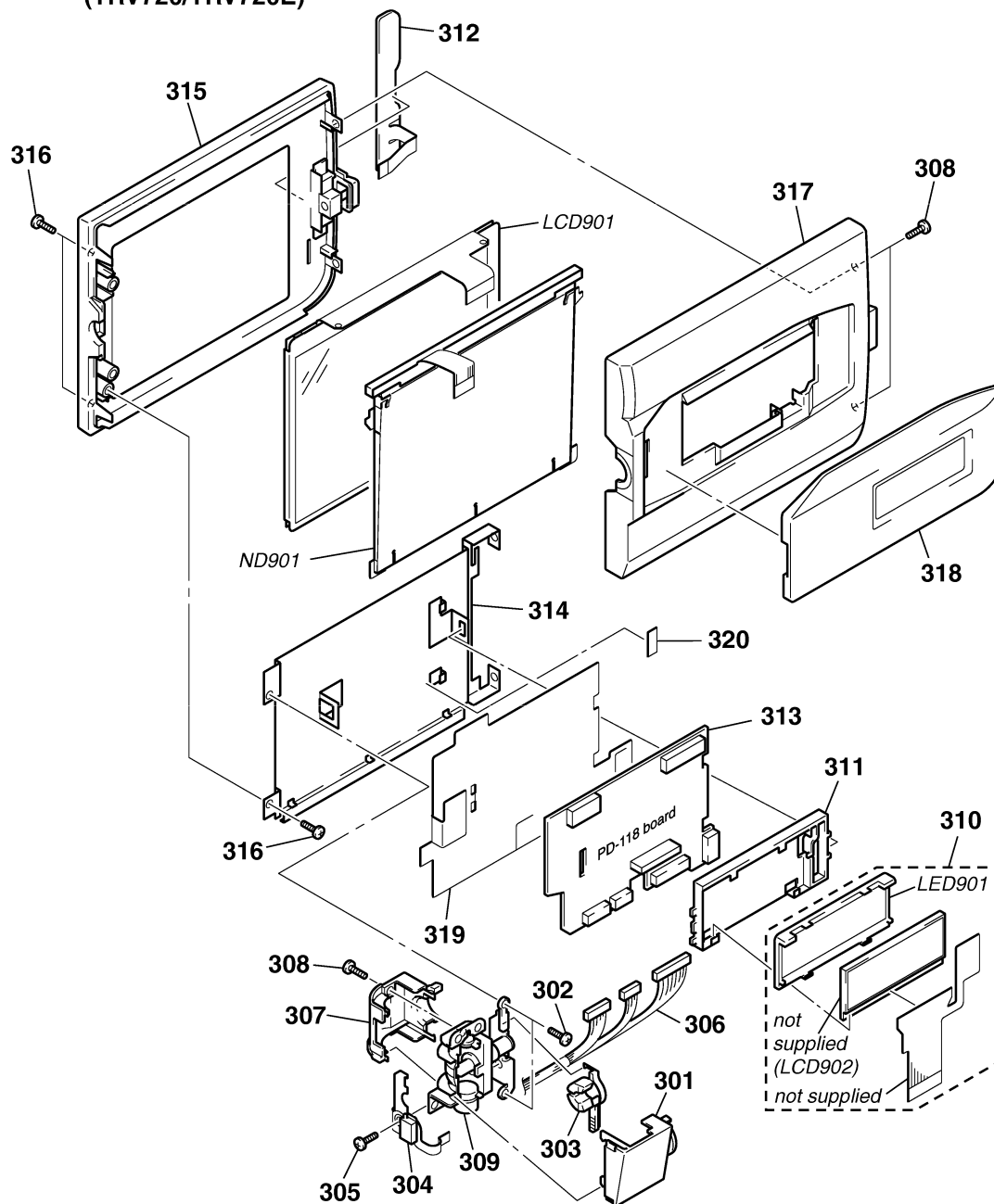
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|----------------------------------|-----------------|--------------|------------------------------------|----------------------------------|
| 201 | 3-058-722-01 | COVER (C (102)), HINGE | | 215 | X-3950-241-1 | CABINET (M) (102) ASSY, P | |
| 202 | 3-948-339-31 | SCREW, TAPPING | | | | | (TRV420E/TRV525) |
| * 203 | 3-058-672-01 | CLAMP, HARNESS | | 216 | 3-948-339-81 | TAPPING | |
| 204 | 1-418-802-11 | SWITCH BLOCK, PANEL REVERSE (PR-10000) | | 217 | X-3950-242-1 | CABINET (C) (102) ASSY, P | |
| 205 | 4-981-286-01 | SCREW (M1.7X2) (1B LOCK) | | 218 | 3-058-716-01 | WINDOW (102), LCD (TRV520/TRV520P) | |
| | | | | 218 | 3-058-716-11 | WINDOW (102), LCD (TRV525) | |
| 206 | 1-960-225-11 | HARNESS (DP-83) | | 218 | 3-058-716-21 | WINDOW (102), LCD (TRV520E) | |
| 207 | 3-058-673-01 | COVER (M), HINGE | | 218 | 3-058-716-31 | WINDOW (102), LCD (TRV420E) | |
| 208 | 3-968-729-01 | SCREW (2X4) | | 218 | 3-058-716-51 | WINDOW (102), LCD (TRV620E) | |
| 209 | X-3950-237-1 | HINGE ASSY | | * 219 | 3-058-720-01 | INSULATING SHEET (B (102)), PD | |
| 210 | A-7094-826-A | INDICATION (LCD) BLOCK ASSY (SERVICE) | | * 220 | 3-062-064-01 | PD SHEET | |
| 211 | 3-058-715-01 | HOLDER (102), LCD | | | | | |
| 212 | 1-418-803-11 | SWITCH BLOCK, CONTROL (BV-10000) | | LCD901 | 1-803-854-21 | INDICATOR MODULE, LIQUID CRYSTAL | |
| 213 | A-7074-348-A | PD-118 BOARD, COMPLETE (3.5 LCD TYPE S) | | | | | (3 LCD TYPE S) (Note) |
| | | | (Note) | LCD901 | 1-803-855-21 | INDICATOR MODULE, LIQUID CRYSTAL | |
| 213 | A-7074-374-A | PD-118 BOARD, COMPLETE (3 LCD TYPE S) | | | | | (3.5 LCD TYPE S) (Note) |
| | | | (Note) | LCD901 | 1-803-861-21 | INDICATOR MODULE, LIQUID CRYSTAL | |
| 213 | A-7074-377-A | PD-118 BOARD, COMPLETE (3.5 LCD TYPE C) | | | | | (3.5 LCD TYPE C) (Note) |
| | | | (Note) | Δ LED901 | 1-517-866-11 | LIGHT, BACK | |
| 214 | 3-058-714-01 | FRAME (102), PANEL | | Δ ND901 | 1-517-855-21 | TUBE, FLUORESCENT, COLD CATHODE | |
| 215 | X-3950-240-1 | CABINET (M) (102) ASSY, P | | | | | (3.5 LCD model) (TRV520/TRV520E/ |
| | | | (TRV520/TRV520E/TRV520P/TRV620E) | | | | TRV520P/TRV620E) |
| | | | | Δ ND901 | 1-517-856-21 | TUBE, FLUORESCENT, COLD CATHODE | |
| | | | | | | | (3 LCD model) (TRV420E/TRV525) |

**6-1-6. CABINET (R) SECTION (4 LCD model)
(TRV720/TRV720E)**



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|----------------------------------|--------|----------|--------------|---------------------------------|--------|
| 251 | 3-059-547-01 | COVER (R) (103), HINGE | | 262 | 1-960-227-11 | HARNESS (DP-87) | |
| 252 | 3-948-339-61 | TAPPING | | 263 | A-7074-382-A | KP-009 BOARD, COMPLETE | |
| 253 | X-3950-441-1 | CABINET (R) (103) ASSY | | * 264 | 3-058-640-01 | RETAINER (100), HARNESS | |
| 254 | 3-059-533-01 | KNOB (103), MF | | 265 | 3-968-729-01 | SCREW (2X4) | |
| 255 | 3-059-532-01 | RETAINER (103), MF | | 266 | X-3950-551-1 | BASE (103) ASSY, SLIDE | |
| 256 | 3-959-978-02 | CUSHION, PANEL | | 267 | 3-948-339-81 | TAPPING | |
| 257 | 1-418-801-11 | SWITCH BLOCK, CONTROL (MF-10000) | | 268 | X-3950-230-1 | HINGE ASSY, VF | |
| 258 | 3-941-343-21 | TAPE (A) | | * 269 | 3-060-376-01 | SHEET METAL (103), SLIDE | |
| * 259 | 3-058-658-01 | SPACER (101), SPEAKER | | 270 | X-3950-552-1 | BASE (103) ASSY, VF | |
| * 260 | 3-058-659-01 | RETAINER (101), SPEAKER | | S008 | 1-771-848-11 | SWITCH, PUSH (PANEL OPEN/CLOSE) | |
| 261 | A-7074-378-A | CF-72 BOARD, COMPLETE | | SP003 | 1-529-590-11 | SPEAKER (2.0cm) | |

**6-1-7. 4 LCD ASSEMBLY SECTION
(TRV720/TRV720E)**



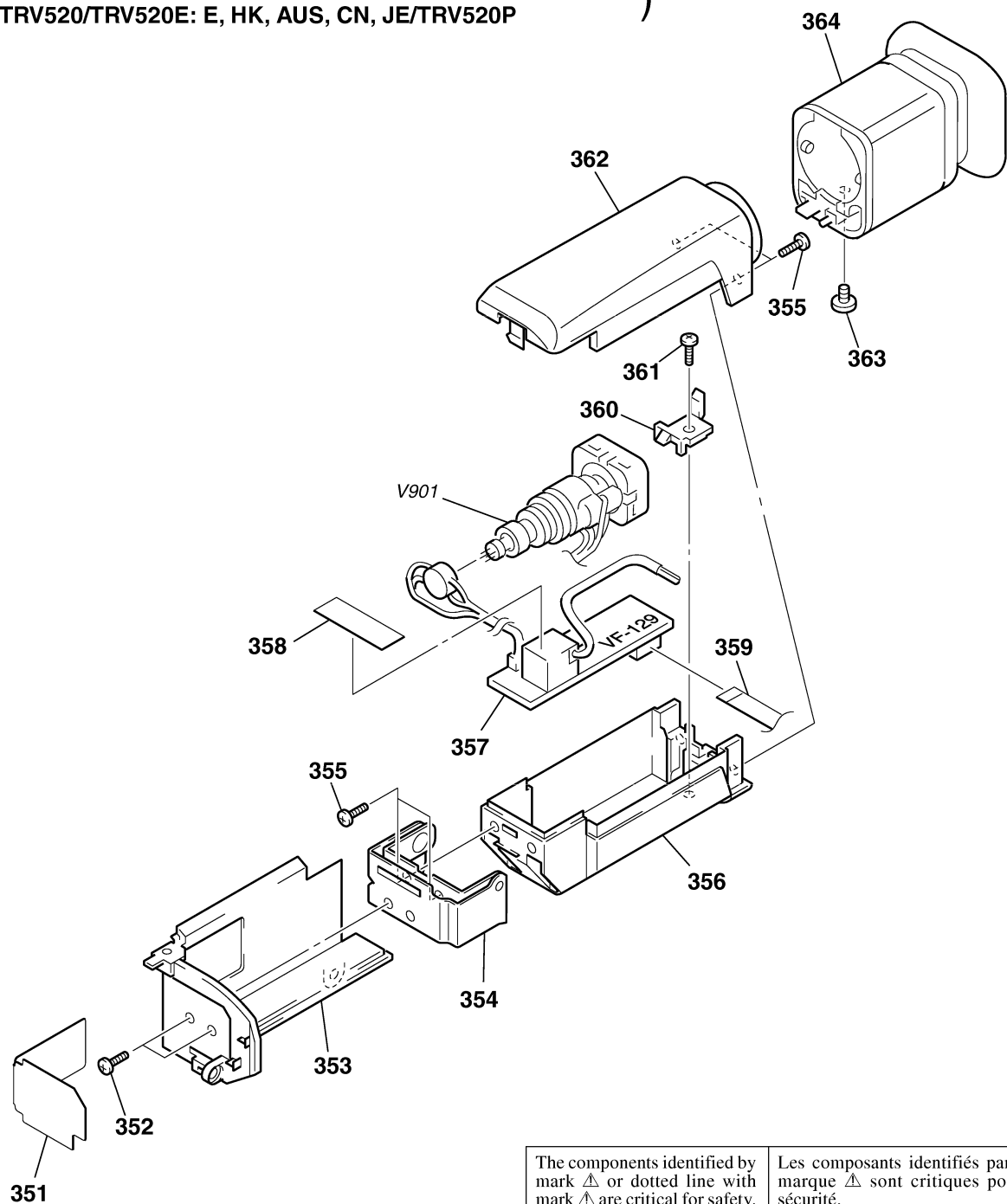
(Note) About PD-118 board and LCD module, discriminate LCD type on the machine referring to page 9, and replace the same type.

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

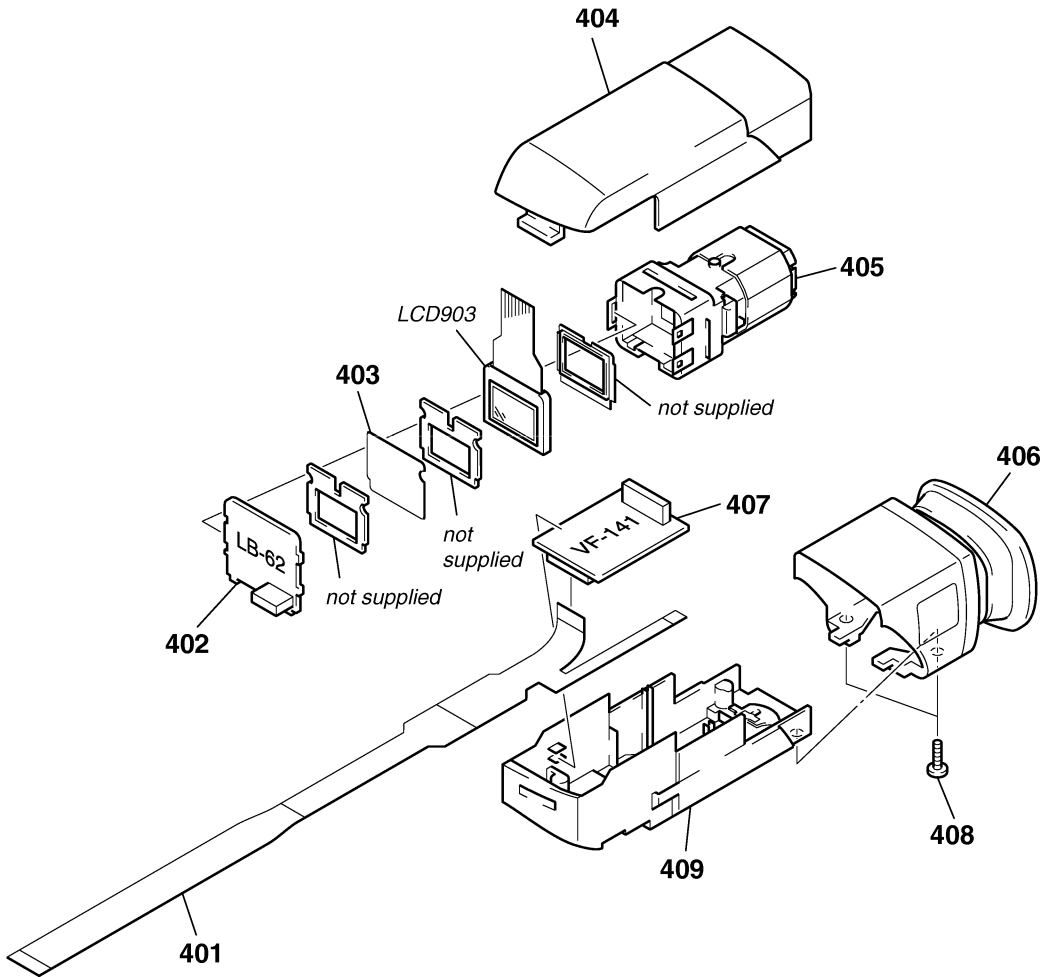
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|--|--------|-----------------|--------------|---|--------|
| 301 | 3-059-548-01 | COVER (C) (103), HINGE | | 314 | 3-059-546-01 | FRAME (103), PANEL | |
| 302 | 3-948-339-31 | SCREW, TAPPING | | 315 | X-3950-444-1 | CABINET (M) (103) ASSY, P | |
| * 303 | 3-058-672-01 | CLAMP, HARNESS | | 316 | 3-948-339-81 | TAPPING | |
| 304 | 1-418-802-11 | SWITCH BLOCK, PANEL REVERSE (PR-10000) | | 317 | X-3950-445-1 | CABINET (C) (103) ASSY, P | |
| 305 | 4-981-286-01 | SCREW (M1.7X2) (1B LOCK) | | 318 | 3-059-549-01 | WINDOW (103), LCD (TRV720) | |
| 306 | 1-960-225-11 | HARNESS (DP-83) | | 318 | 3-059-549-11 | WINDOW (103), LCD (TRV720E) | |
| 307 | 3-058-673-01 | COVER (M), HINGE | | * 319 | 3-058-720-01 | INSULATING SHEET (B (102)), PD | |
| 308 | 3-968-729-01 | SCREW (2X4) | | * 320 | 3-062-064-01 | PD SHEET | |
| 309 | X-3950-237-1 | HINGE ASSY | | LCD901 | 1-803-863-21 | INDICATOR MODULE, LIQUID CRYSTAL (4 LCD TYPE C) (Note) | |
| 310 | A-7094-826-A | INDICATION (LCD) BLOCK ASSY (SERVICE) | | LCD901 | 1-803-893-21 | INDICATOR MODULE, LIQUID CRYSTAL (4 LCD TYPE S) (Note) | |
| 311 | 3-058-715-01 | HOLDER (102), LCD | | Δ LED901 | 1-517-866-11 | LIGHT, BACK | |
| 312 | 1-418-803-11 | SWITCH BLOCK, CONTROL (BV-10000) | | Δ ND901 | 1-517-852-21 | TUBE, FLUORESCENT, COLD CATHODE | |
| 313 | A-7074-371-A | PD-118 BOARD, COMPLETE (4 LCD TYPE S) | (Note) | | | | |
| 313 | A-7074-383-A | PD-118 BOARD, COMPLETE (4 LCD TYPE C) | (Note) | | | | |

6-1-8. CRT EVF BLOCK SECTION
(TRV320/TRV320E: E, HK, AUS, CN/TRV320P/TRV420E: CN/
TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P)



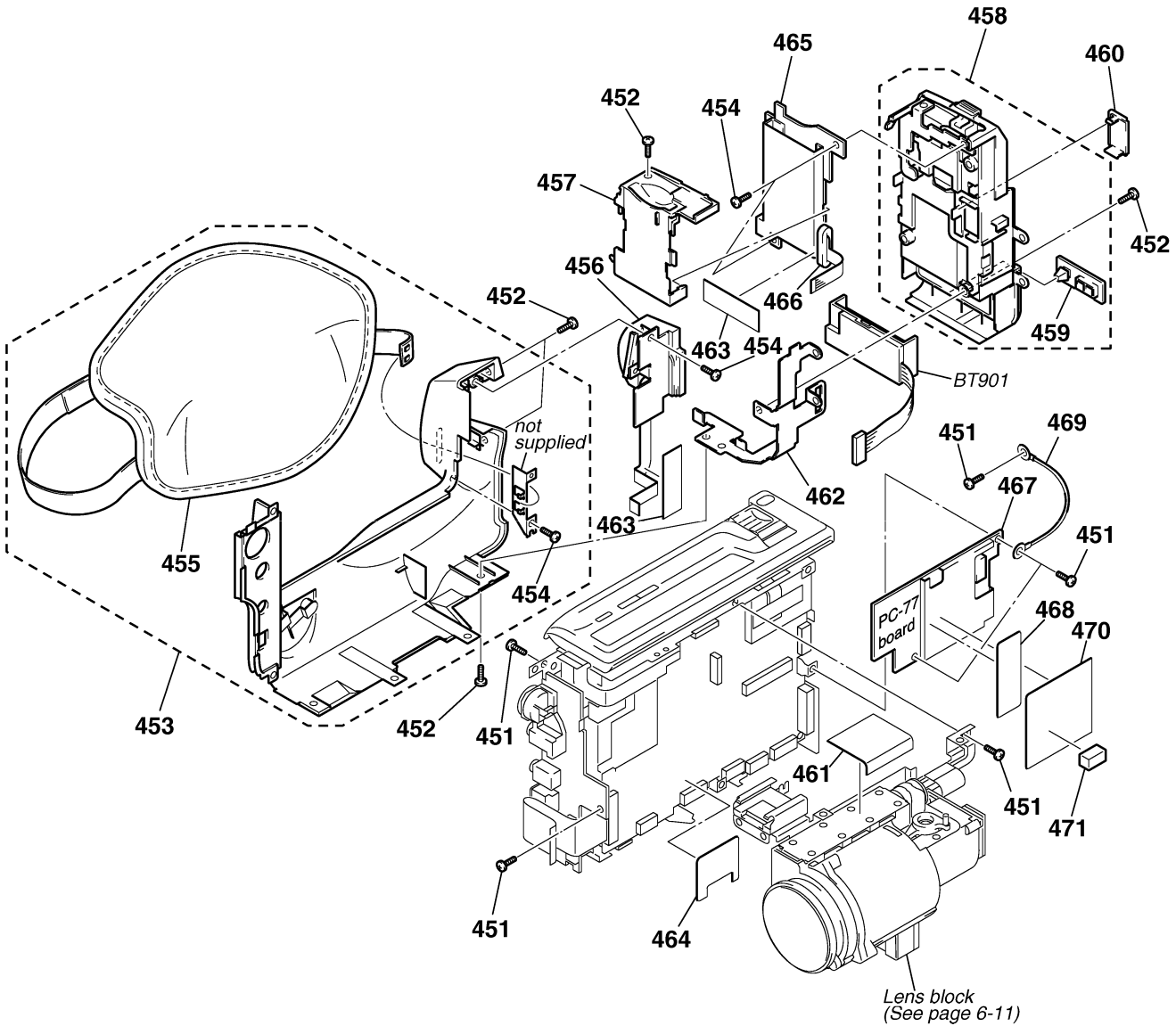
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|----------|--------------|-------------------------------------|--------|
| * 351 | 3-058-641-01 | GUIDE (100), HARNESS | | 358 | 3-941-343-21 | TAPE (A) | |
| 352 | 3-968-729-01 | SCREW (2X4) | | 359 | 1-792-454-11 | CABLE, FLEXIBLE FLAT (FFC-289) | |
| 353 | X-3950-234-1 | BASE (B) (100) ASSY, VF | | 360 | 3-053-681-01 | TALLY, EVF | |
| 354 | X-3950-230-1 | HINGE ASSY, VF | | 361 | 3-948-339-61 | TAPPING | |
| 355 | 3-948-339-81 | TAPPING | | 362 | X-3950-233-1 | CABINET (UPPER) (B) (100) ASSY, EVF | |
| 356 | 3-058-644-01 | CABINET (LOWER) (B) (100), EVF | | 363 | 3-975-898-01 | SCREW (T), F LOCK | |
| 357 | A-7073-838-A | VF-129 BOARD, COMPLETE (TRV320/TRV320P/TRV520/TRV520P) | | 364 | X-3949-329-1 | FINDER (S) ASSY | |
| 357 | A-7073-855-A | VF-129 BOARD, COMPLETE (TRV320E: E, HK, AUS, CN/TRV420E: CN/ TRV520E: E, HK, AUS, CN, JE) | | Δ V901 | 1-452-673-61 | CRT ASSY (M01KXX90WB) | |

6-1-9. LCD EVF BLOCK SECTION
(TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP/
TRV525/TRV620E/TRV720/TRV720E)



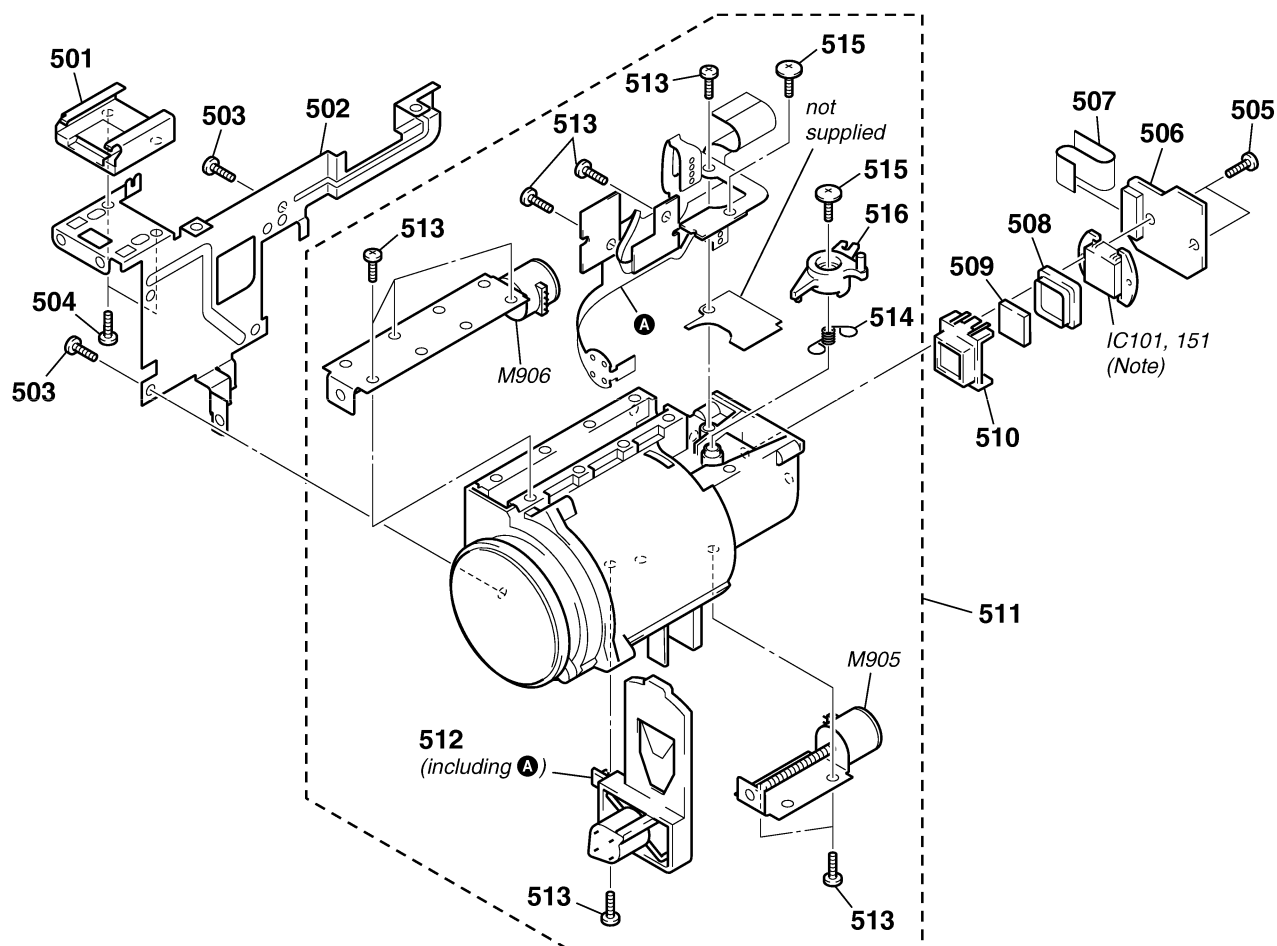
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|----------|--------------|---|--------|
| 401 | 1-676-299-11 | FP-151 FLEXIBLE BOARD | | 406 | X-3950-228-1 | CABINET (REAR) (B) (100) ASSY, EVF | |
| 402 | A-7074-192-A | LB-62 BOARD, COMPLETE | | | | (TRV320E: AEP, UK, EE, NE, RU/ | |
| | | (TRV525/TRV620E/TRV720/TRV720E) | | | | TRV420E: AEP/TRV520E: AEP) | |
| 402 | A-7074-351-A | LB-62 BOARD, COMPLETE (TRV320E: AEP, UK, | | 406 | X-3950-550-1 | CABINET (REAR) (103) ASSY, EVF | |
| | | EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | | | | (TRV720/TRV720E) | |
| 403 | 3-058-233-01 | ILLUMINATOR (97), BL | | 407 | A-7074-193-A | VF-141 BOARD, COMPLETE | |
| 404 | 3-058-638-01 | CABINET (UPPER) (100), EVF | | | | (TRV525/TRV620E/TRV720/TRV720E) | |
| | | (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/ | | 407 | A-7074-352-A | VF-141 BOARD, COMPLETE (TRV320E: AEP, | |
| | | TRV520E: AEP/TRV525/TRV620E) | | | | UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | |
| | | | | 408 | 3-948-339-81 | TAPPING | |
| 404 | 3-060-370-01 | CABINET (UPPER) (103), EVF | | | | | |
| | | (TRV720/TRV720E) | | 409 | X-3950-226-1 | CABINET (LOWER) (100) ASSY, EVF | |
| 405 | X-3950-101-1 | LENS (C) (97) ASSY, VF | | | | (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/ | |
| | | (TRV525/TRV620E/TRV720/TRV720E) | | | | TRV520E: AEP/TRV525/TRV620E) | |
| 405 | X-3950-232-1 | LENS (B) (100) ASSY, VF (TRV320E: AEP, UK, | | 409 | X-3950-549-1 | CABINET (LOWER) (103) ASSY, EVF | |
| | | EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | | | | (TRV720/TRV720E) | |
| 406 | X-3950-227-1 | CABINET (REAR) (100) ASSY, EVF | | LCD903 | 8-753-026-74 | LCX032AK-1 | |
| | | (TRV525/TRV620E) | | | | (TRV525/TRV620E/TRV720/TRV720E) | |
| | | | | LCD903 | 8-753-026-76 | LCX032AL-5 (TRV320E: AEP, UK, EE, NE, RU/ | |
| | | | | | | TRV420E: AEP/TRV520E: AEP) | |

6-1-10. CABINET (L) SECTION



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|----------|--------------|----------------------------|--------|
| 451 | 3-713-786-21 | SCREW (M2X3) | | 457 | X-3950-225-1 | CABINET ASSY, MS | |
| 452 | 3-968-729-01 | SCREW (2X4) | | 458 | X-3950-222-1 | PANEL ASSY, BATTERY | |
| 453 | X-3950-434-1 | CABINET (L) ASSY (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P/TRV525/TRV720/TRV720E: E, HK, CN) | | 459 | 3-987-656-01 | LID, JACK | |
| 453 | X-3950-435-1 | CABINET (L) ASSY (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | | 460 | 3-975-752-01 | LID (BT), CPC | |
| 453 | X-3950-453-1 | CABINET (L) ASSY (TRV620E/TRV720E: AEP) | | * 461 | 3-062-065-01 | FK SHEET | |
| 454 | 3-948-339-61 | TAPPING | | 462 | 3-058-619-01 | SHEET METAL (LOWER), STRAP | |
| 455 | 3-052-815-01 | BELT (ES), GRIP | | 463 | 3-941-343-21 | TAPE (A) | |
| 456 | 1-418-800-11 | SWITCH BLOCK, CONTROL (SS-10000) (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P/TRV525/TRV620E/TRV720/TRV720E) | | * 464 | 3-059-461-01 | SHEET, RP SHIELD | |
| 456 | 1-418-800-31 | SWITCH BLOCK, CONTROL (SS-10000) (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | | 465 | 1-676-823-21 | FP-162 FLEXIBLE BOARD | |
| | | | | 466 | 1-500-226-31 | BEAD, FERRITE | |
| | | | | 467 | A-7074-328-A | PC-77 BOARD, COMPLETE | |
| | | | | * 468 | 3-061-337-01 | SHEET (I), PC SHIELD | |
| | | | | 469 | 1-960-596-11 | HARNESS (HT-054) | |
| | | | | * 470 | 3-061-982-01 | SHEET (S), ELECTROSTATIC | |
| | | | | * 471 | 3-062-053-01 | SPACER, PC | |
| | | | | BT901 | 1-694-384-11 | TERMINAL BOARD, BATTERY | |

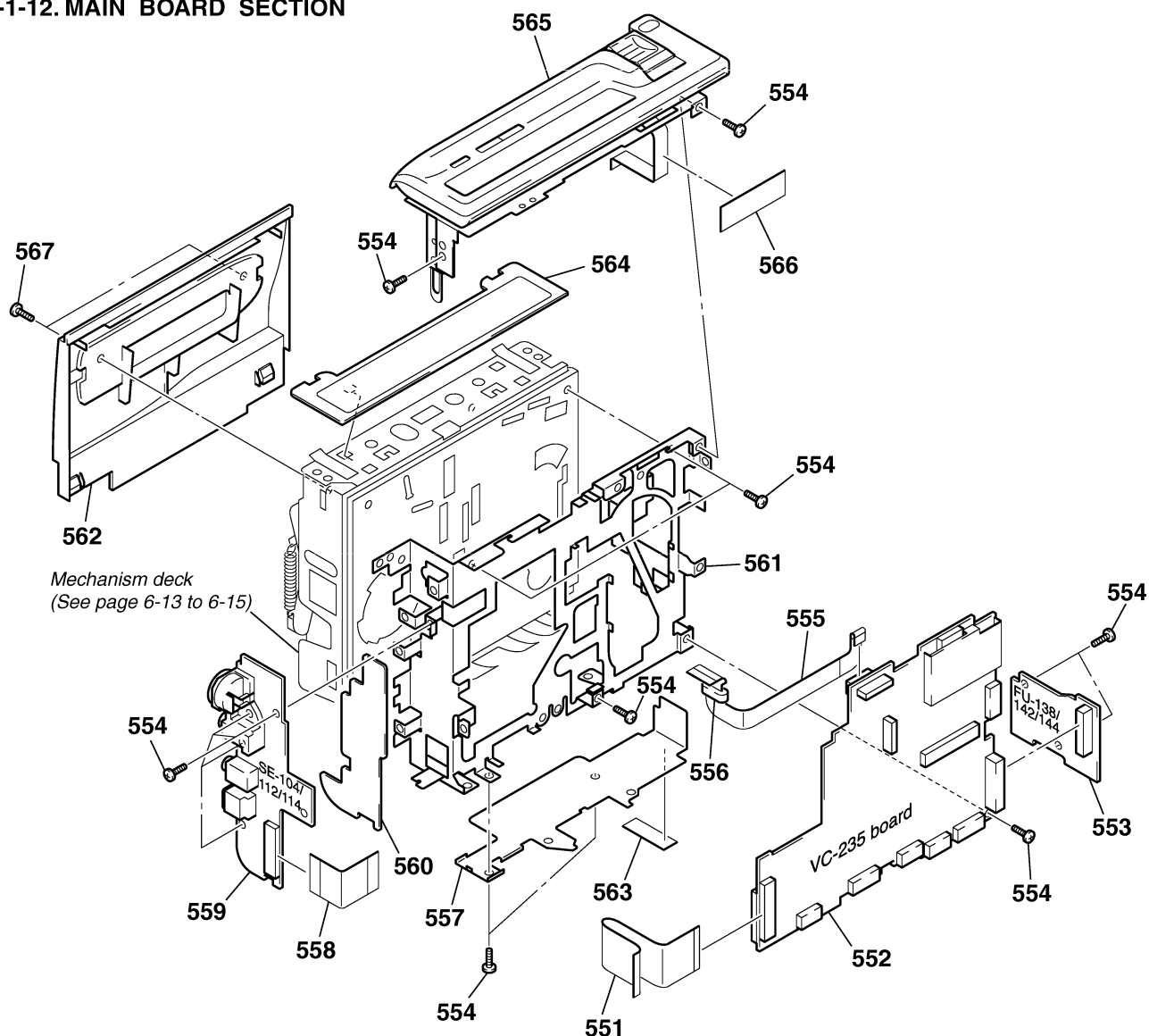
6-1-11.LENS BLOCK SECTION



(Note) Be sure to read "Precautions for Replacement of CCD Imager" on page 4-8, 4-10 when changing the CCD imager

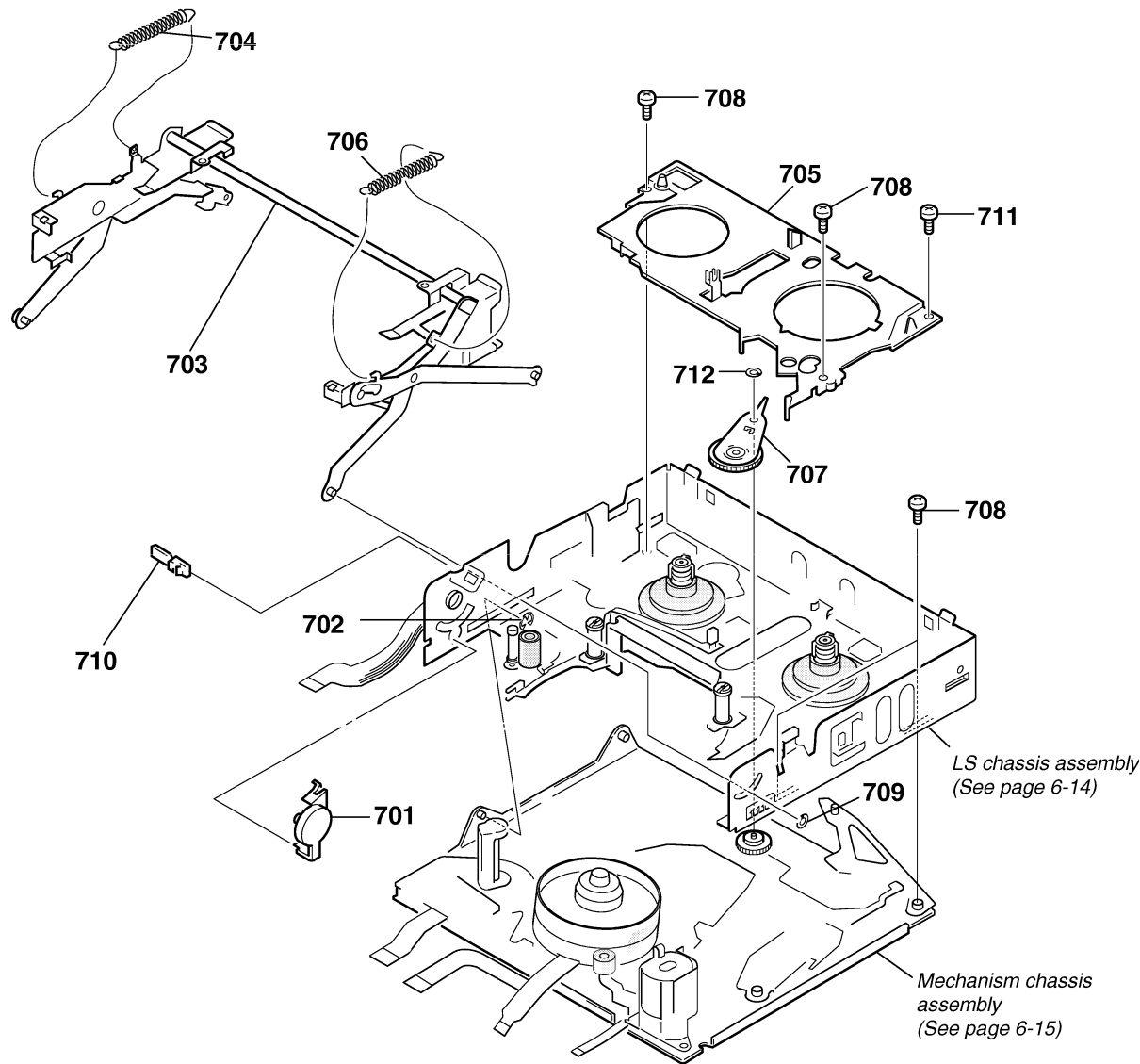
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|----------|--------------|--|--------|
| 501 | 1-793-996-11 | CONNECTOR, EXTERNAL | | 509 | 1-758-216-21 | FILTER BLOCK, OPTICAL (TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720) | |
| 502 | 3-058-595-01 | FRAME, LENS | | 510 | 3-978-981-11 | ADAPTOR (FK), CCD FITTING | |
| 503 | 3-948-339-61 | TAPPING | | 511 | 8-848-736-01 | DEVICE, LENS LSV-680A | |
| 504 | 3-989-735-01 | SCREW (M1.7), LOCK ACE, P2 | | 512 | 1-758-445-11 | IRIS IR-680 (including FLEXIBLE BOARD) | |
| 505 | 3-318-203-11 | SCREW (B1.7X6), TAPPING | | 513 | 3-713-791-41 | TAPPING (B1.7X5) | |
| 506 | A-7074-270-A | CD-242 BOARD, COMPLETE (TRV320/TRV320P) | | 514 | 3-059-508-01 | SPRING, RETAIN | |
| 506 | A-7074-279-A | CD-244 BOARD, COMPLETE (TRV320E) | | 515 | 3-056-022-01 | TAPPING (B1.7X3.5) | |
| 506 | A-7074-346-A | CD-266 BOARD, COMPLETE (TRV520/TRV520P/TRV525) | | 516 | 3-059-501-01 | LEVER, IR | |
| 506 | A-7074-370-A | CD-271 BOARD, COMPLETE (TRV720E) | | IC101 | A-7030-821-A | CCD BLOCK ASSY (CCD IMAGER) (TRV320/TRV320P/TRV520/TRV520P/TRV525/TRV720) (Note) | |
| 506 | A-7074-376-A | CD-267 BOARD, COMPLETE (TRV420E/TRV520E/TRV620E) | | IC151 | A-7031-072-A | CCD BLOCK ASSY (CCD IMAGER) (TRV320E/TRV420E/TRV520E/TRV620E/TRV720E) (Note) | |
| 506 | A-7074-380-A | CD-270 BOARD, COMPLETE (TRV720) | | | | | |
| 507 | 1-676-822-11 | FP-161 FLEXIBLE BOARD | | M905 | 1-763-472-11 | MOTOR, STEPPING (F680) (FOCUS) | |
| 508 | 3-968-054-11 | RUBBER (FM), SHIELD | | M906 | 1-763-471-11 | MOTOR, STEPPING (Z680) (ZOOM) | |
| 509 | 1-758-155-21 | FILTER BLOCK, OPTICAL (TRV320E/TRV420E/TRV520E/TRV620E/TRV720E) | | | | | |

6-1-12.MAIN BOARD SECTION



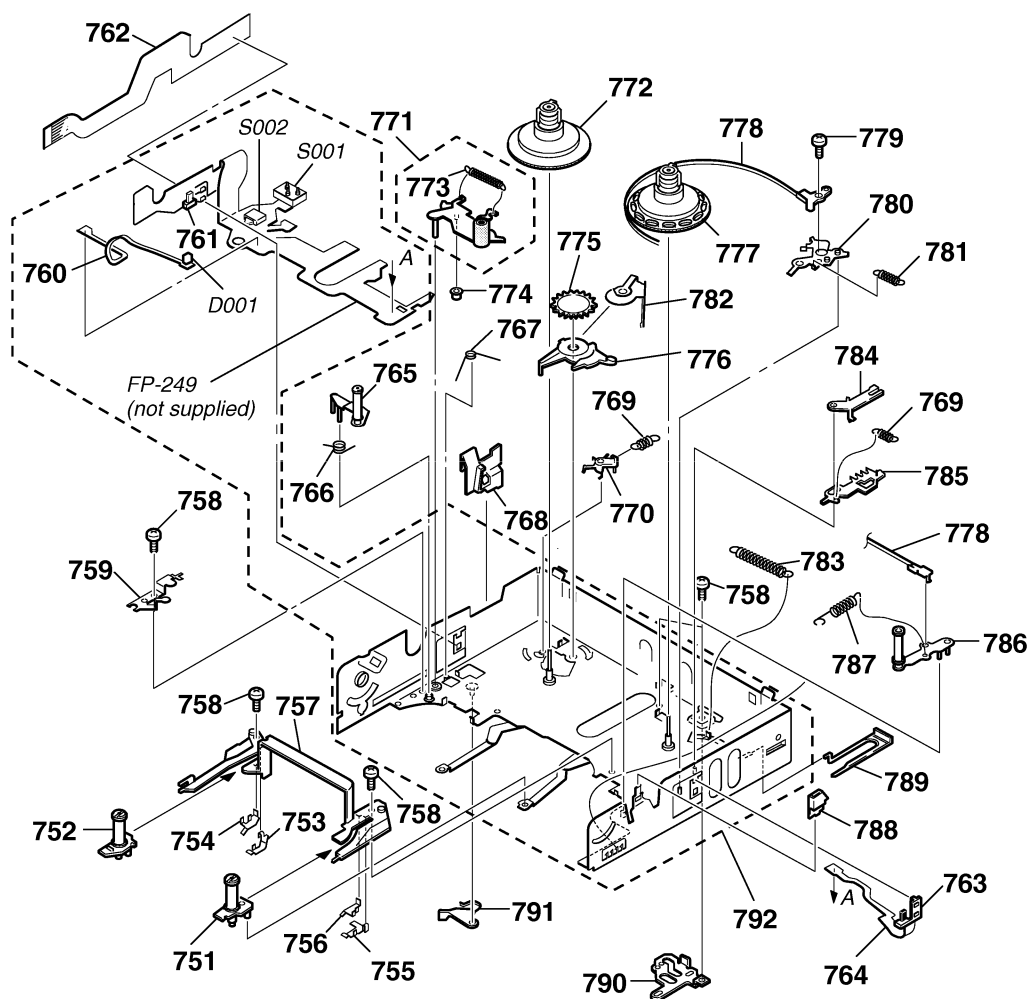
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|--|--------|----------|--------------|--|--------|
| 551 | 1-676-819-11 | FP-157 FLEXIBLE BOARD | | 559 | A-7074-329-A | SE-104 BOARD, COMPLETE (TRV320/TRV320P) | |
| 552 | A-7094-873-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | | 559 | A-7074-345-A | SE-112 BOARD, COMPLETE (TRV520/TRV520P/TRV525) | |
| 552 | A-7094-874-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV320/TRV320P/TRV520/TRV520P) | | 559 | A-7074-353-A | SE-104 BOARD, COMPLETE (TRV320E) | |
| 552 | A-7094-875-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV525/TRV720) | | 559 | A-7074-369-A | SE-114 BOARD, COMPLETE (TRV720E) | |
| 552 | A-7094-877-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV620E/TRV720E) | | 559 | A-7074-375-A | SE-112 BOARD, COMPLETE (TRV420E/TRV520E/TRV620E) | |
| 552 | A-7094-878-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV320E: E, HK, AUS, CN/TRV420E: CN/TRV520E: E, HK, AUS, CN, JE) | | 559 | A-7074-379-A | SE-114 BOARD, COMPLETE (TRV720) | |
| 553 | A-7074-271-A | FU-138 BOARD, COMPLETE (TRV320/TRV320E/TRV320P) | | * 560 | 3-060-001-01 | SHEET, MD | |
| 553 | A-7074-347-A | FU-142 BOARD, COMPLETE (TRV420E/TRV520/TRV520E/TRV520P /TRV525/TRV620E) | | 561 | 3-058-593-01 | FRAME (A), MD | |
| 553 | A-7074-381-A | FU-144 BOARD, COMPLETE (TRV720/TRV720E) | | 562 | X-3950-224-1 | LID ASSY, CASSETTE | |
| 554 | 3-713-786-21 | SCREW (M2X3) | | * 563 | 3-061-971-01 | SHEET, MD FRAME (B) INSULATING | |
| 555 | 1-676-821-11 | FP-160 FLEXIBLE BOARD | | 564 | X-3950-698-1 | LID (MS) ASSY, LS | |
| 556 | 1-500-226-31 | BEAD, FERRITE | | 565 | 1-418-799-11 | SWITCH BLOCK, CONTROL (FK-10000) (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P/TRV525/TRV620E/ TRV720/TRV720E) | |
| 557 | 3-058-594-01 | FRAME (B), MD | | 565 | 1-418-799-21 | SWITCH BLOCK, CONTROL (FK-10000) (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | |
| 558 | 1-676-820-11 | FP-159 FLEXIBLE BOARD | | 566 | 3-941-343-21 | TAPE (A) | |
| | | | | 567 | 3-968-729-01 | SCREW (2X4) | |

6-1-13. CASSETTE COMPARTMENT ASSEMBLY



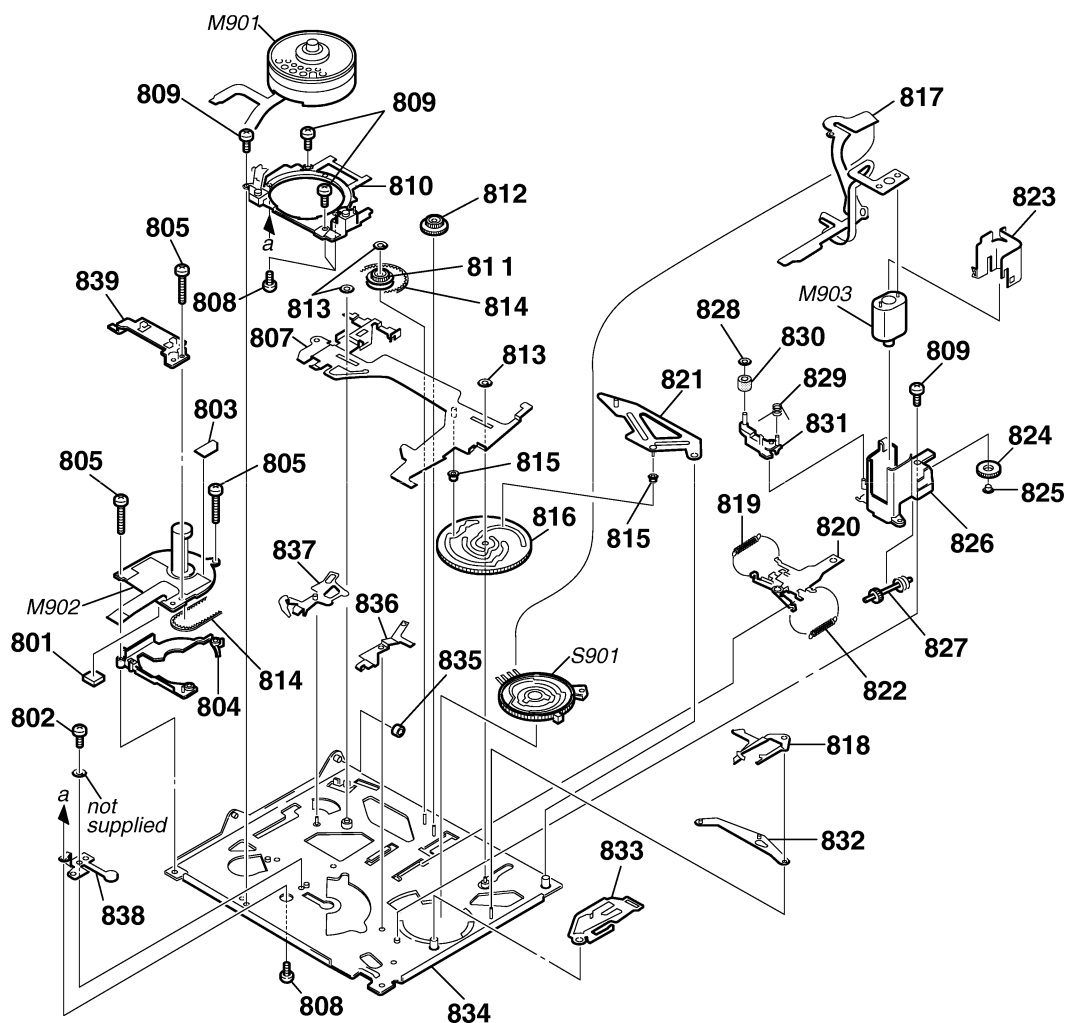
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---------------------------------|--------|----------|--------------|----------------------|--------|
| 701 | A-7040-421-A | DAMPER ASSY | | 707 | X-3945-399-1 | GEAR ASSY, GOOSENECK | |
| 702 | 7-624-102-04 | STOP RING 1.5, TYPE -E | | 708 | 3-947-503-01 | SCREW (M1.4) | |
| 703 | X-3949-153-2 | CASSETTE COMPARTMENT ASSY | | 709 | 3-979-686-01 | WASHER, STOPPER | |
| 704 | 3-965-587-03 | SPRING (POWER TENSION), TENSION | | 710 | 3-971-076-01 | FASTENER, D | |
| 705 | 3-989-479-01 | RETAINER (2), GOOSENECK | | 711 | 3-976-055-01 | SCREW (M1.4X1) | |
| 706 | 3-973-268-01 | SPRING (POWER TENSION), TENSION | | 712 | 3-331-007-21 | WASHER | |

6-1-14. LS CHASSIS ASSEMBLY



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-------------------------------|--------|----------|--------------|--|--------|
| 751 | A-7040-419-A | BASE (S) BLOCK ASSY, GUIDE | | 774 | 3-965-579-01 | ROLLER, PINCH PRESS | |
| 752 | A-7040-418-B | BASE (T) BLOCK ASSY, GUIDE | | 775 | 3-965-563-01 | GEAR, T SOFT | |
| 753 | 3-965-559-01 | STOPPER (T) | | 776 | 3-965-565-01 | CLAW, T SOFT | |
| 754 | 3-965-557-01 | STOPPER (T), GB | | 777 | X-3945-397-1 | DECK ASSY, REEL, S | |
| 755 | 3-965-558-01 | STOPPER (S) | | 778 | X-3945-396-1 | BAND ASSY, TENSION REGULATOR | |
| 756 | 3-965-556-01 | STOPPER (S), GB | | 779 | 3-945-756-01 | SCREW (M1.4X3) | |
| 757 | 3-965-553-01 | RAIL, GUIDE | | 780 | 3-965-583-01 | ARM, RVS | |
| 758 | 3-947-503-01 | SCREW (M1.4) | | 781 | 3-965-580-01 | SPRING (ARM, RVS), TENSION | |
| 759 | 3-965-573-01 | RETAINER, TG4 | | 782 | 3-966-384-01 | SPRING, T SOFT | |
| 760 | 1-658-213-11 | FP-355 FLEXIBLE BOARD | | 783 | 3-965-578-01 | SPRING, TENSION COIL | |
| 761 | 3-965-552-01 | HOLDER (T), SENSOR | | 784 | 3-965-560-01 | RATCHET, S | |
| 762 | 1-657-786-13 | FP-221 FLEXIBLE BOARD | | 785 | 3-965-561-01 | PLATE, RELEASE, S RATCHET | |
| 763 | 3-965-551-01 | HOLDER (S), SENSOR | | 786 | X-3945-395-1 | ARM ASSY, TG1 | |
| 764 | 1-658-214-11 | FP-356 FLEXIBLE BOARD | | 787 | 3-965-576-01 | SPRING (TG1), TENSION | |
| 765 | A-7040-417-A | ARM BLOCK ASSY, TG4 | | 788 | 3-965-567-01 | LID OPEN | |
| 766 | 3-965-574-01 | SPRING (RETURN, TG4), TORSION | | 789 | 3-965-566-01 | COVER, LS GUIDE | |
| 767 | 3-965-575-01 | SPRING (PINCH), TORSION | | * 790 | 3-965-577-01 | PLATE, CAM, LS | |
| 768 | 3-965-568-11 | GUIDE, LOCK | | 791 | 3-965-569-01 | ARM, EJ | |
| 769 | 3-965-562-01 | SPRING (RATCHET), TENSION | | 792 | A-7040-427-B | CHASSIS (S1) ASSY, LS | |
| 770 | 3-965-581-03 | RATCHET, T | | D001 | 8-719-988-42 | DIODE GL453 | |
| 771 | X-3949-380-1 | ARM ASSY (E), PINCH | | S001 | 1-692-614-11 | SWITCH, PUSH (3 KEY) (Hi8 MP, ME/MP, REC PROOF) | |
| 772 | X-3945-398-2 | DECK ASSY, REEL, | | S002 | 1-572-688-11 | SWITCH, PUSH (1 KEY) (C LOCK) | |
| 773 | 3-965-648-01 | SPRING (PINCH), TENSION | | | | | |

6-1-15. MECHANISM CHASSIS ASSEMBLY



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|------------------------------|--------|----------|--------------|------------------------------------|--------|
| 801 | 3-987-953-01 | SPACER, RUBBER | | 823 | 3-965-542-01 | SHIELD, MOTOR | |
| 802 | 3-965-550-02 | SCREW (M1.7X1.6) | | 824 | 3-965-539-01 | GEAR (A) | |
| 803 | 1-657-785-11 | FP-248 FLEXIBLE BOARD | | 825 | 3-965-538-01 | SLEEVE, MOTOR HOLDER | |
| 804 | 3-054-404-01 | SPACER, CAPSTAN | | 826 | 3-965-540-01 | HOLDER, MOTOR | |
| 805 | 3-965-549-01 | SCREW (M1.4 X 6.5) | | 827 | 3-965-541-01 | SHAFT, WORM | |
| 807 | 3-971-644-02 | SLIDER (2), M | | 828 | 3-321-393-01 | WASHER, STOPPER | |
| 808 | X-3947-895-1 | SCREW ASSY, DRUM ATTACHED | | 829 | 3-965-724-01 | SPRING (RETURN, HC), TORSION | |
| 809 | 3-947-503-01 | SCREW (M1.4) | | 830 | A-7040-423-A | ROLLER BLOCK ASSY, HC | |
| 810 | A-7040-494-A | BASE BLOCK ASSY, DRUM | | 831 | X-3945-407-1 | ARM ASSY, HC ROLLER | |
| 811 | 3-965-527-01 | GEAR, CHANGE | | 832 | 3-965-531-01 | ARM, GL | |
| 812 | 3-965-544-01 | GEAR, RELAY | | 833 | 3-965-530-01 | PLATE (2), REGULATOR, TENSION | |
| 813 | 3-331-007-21 | WASHER | | 834 | X-3949-589-3 | CHASSIS ASSY, MECHANICAL | |
| 814 | 3-965-546-01 | BELT, TIMING | | 835 | 3-965-526-02 | ROLLER, LS GUIDE | |
| 815 | 3-965-533-01 | ROLLER, LS | | 836 | 3-965-547-01 | ARM, HC DRIVING | |
| 816 | 3-965-528-01 | GEAR, CAM | | 837 | 3-965-534-01 | PLATE, PRESS, PINCH | |
| 817 | 1-657-784-11 | FP-220 FLEXIBLE BOARD | | 838 | 3-974-320-02 | GROUND (IM), SHAFT | |
| 818 | 3-965-529-01 | PLATE, REGULATOR, TENSION | | 839 | 3-966-349-01 | HOLDER, FLEXIBLE | |
| 819 | 3-965-536-01 | SPRING (LIMITER ARM T), COIL | | M901 | A-7048-938-A | DRUM BLOCK ASSY (DKH-02A-R) | |
| 820 | X-3945-388-1 | SLIDER ASSY, GL | | M902 | 8-835-531-32 | MOTOR, DC SCE-0601A/C-NP (CAPSTAN) | |
| 821 | 3-965-532-21 | ARM, LS | | M903 | X-3945-401-1 | MOTOR ASSY, DC (LOADING) | |
| 822 | 3-965-535-01 | SPRING (LIMITER ARM S), COIL | | S901 | 1-762-436-15 | SWITCH (ENCODER), ROTARY | |

6-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Abbreviation**
AR : Argentine model EE : East European model KR : Korea model
AUS : Australian model HK : Hong Kong model NE : North European model
CN : Chinese model JE : Tourist model RU : Russian model
CND: Canadian model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS**
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS**
uF: μ F
- COILS**
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

About PD-117/118 board and LCD module, discriminate LCD type on the machine referring to page 9, and replace the same type.

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------------|--------------|--|-------------------|------------------|--------------|---|-----------------|
| | A-7074-270-A | CD-242 BOARD, COMPLETE (TRV320/TRV320P) | | | A-7074-279-A | CD-244 BOARD, COMPLETE (TRV320E) | |
| | A-7074-346-A | CD-266 BOARD, COMPLETE (TRV520/TRV520P/TRV525) | | | A-7074-376-A | CD-267 BOARD, COMPLETE (TRV420E/TRV520E/TRV620E) | |
| | A-7074-380-A | CD-270 BOARD, COMPLETE (TRV720) ***** (Ref. No.: 20, 000 Series) (IC001 is not included in this complete board) | | | A-7074-370-A | CD-271 BOARD, COMPLETE (TRV720E) ***** (Ref. No.: 20, 000 Series) (IC151 is not included in this complete board) | |
| < CAPACITOR > | | | | < CAPACITOR > | | | |
| C102 | 1-119-751-11 | TANTAL. CHIP | 22uF 20% 16V | C151 | 1-162-964-11 | CERAMIC CHIP | 0.001uF 10% 50V |
| C105 | 1-107-826-91 | CERAMIC CHIP | 0.1uF 10% 16V | C152 | 1-119-751-11 | TANTAL. CHIP | 22uF 20% 16V |
| C106 | 1-113-682-11 | TANTAL. CHIP | 33uF 20% 10V | C155 | 1-113-682-11 | TANTAL. CHIP | 33uF 20% 10V |
| C108 | 1-164-360-11 | CERAMIC CHIP | 0.1uF 16V | C156 | 1-162-915-11 | CERAMIC CHIP | 10PF 0.5PF 50V |
| < CONNECTOR > | | | | C157 | 1-164-360-11 | CERAMIC CHIP | 0.1uF 16V |
| CN101 | 1-766-346-21 | CONNECTOR, FFC/FPC 16P | | C158 | 1-135-177-21 | TANTALUM CHIP | 1uF 20% 20V |
| < IC > | | | | C159 | 1-127-820-91 | CERAMIC | 4.7uF 16V |
| IC101 | A-7030-821-A | CCD BLOCK ASSY (CCD IMAGER) | | < CONNECTOR > | | | |
| < COIL > | | | | CN151 | 1-766-346-21 | CONNECTOR, FFC/FPC 16P | |
| L102 | 1-469-528-91 | INDUCTOR | 100uH | < FERRITE BEAD > | | | |
| < TRANSISTOR > | | | | * FB001 | 1-500-282-11 | INDUCTOR CHIP | 0uH |
| Q101 | 8-729-117-73 | TRANSISTOR | 2SC4178-F13F14-T1 | < IC > | | | |
| < RESISTOR > | | | | IC151 | A-7031-072-A | CCD BLOCK ASSY (CCD IMAGER) | |
| R101 | 1-216-864-11 | METAL CHIP | 0 5% 1/16W | IC152 | 8-759-561-46 | IC AD8014ART-REEL7 | |
| R102 | 1-216-864-11 | METAL CHIP | 0 5% 1/16W | < COIL > | | | |
| R103 | 1-216-827-11 | METAL CHIP | 3.3K 5% 1/16W | L151 | 1-469-528-91 | INDUCTOR | 100uH |
| R105 | 1-216-857-11 | METAL CHIP | 1M 5% 1/16W | L152 | 1-469-528-91 | INDUCTOR | 100uH |
| < RESISTOR > | | | | < RESISTOR > | | | |
| | | | | R151 | 1-216-808-11 | METAL CHIP | 82 5% 1/16W |
| | | | | R154 | 1-216-821-11 | METAL CHIP | 1K 5% 1/16W |
| | | | | R155 | 1-216-829-11 | METAL CHIP | 4.7K 5% 1/16W |
| | | | | R156 | 1-216-830-11 | METAL CHIP | 5.6K 5% 1/16W |
| | | | | R157 | 1-216-864-11 | METAL CHIP | 0 5% 1/16W |

(Note) Be sure to read "Precautions for Replacement of CCD Imager" on page 4-8, 4-10 when changing the CCD imager

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|-------------------------------------|--------------|---|--------|------------|--------------|---|---|
| | A-7074-327-A | CF-69 BOARD, COMPLETE (TRV320/TRV320E: E, HK, AUS, CN/TRV320P) | | R013 | 1-216-803-11 | METAL CHIP 33 5% | 1/16W |
| | A-7074-350-A | CF-69 BOARD, COMPLETE (TRV320E: AEP, UK, EE, NE, RU) | | R014 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| ***** (Ref. No.: 20, 000 Series) | | | | R015 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| < BATTERY HOLDER > | | | | R016 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| BH001 | 1-550-104-11 | HOLDER, BATTERY | | R017 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| < CAPACITOR > | | | | R019 | 1-216-816-11 | METAL CHIP 390 5% | 1/16W |
| C001 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | | R020 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| C009 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | | R021 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| C010 | 1-164-346-11 | CERAMIC CHIP 1uF 16V (TRV320E: AEP, UK, EE, NE, RU) | | R022 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| C011 | 1-164-346-11 | CERAMIC CHIP 1uF 16V (TRV320E: AEP, UK, EE, NE, RU) | | R023 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| < CONNECTOR > | | | | R024 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| CN001 | 1-785-760-21 | CONNECTOR, FFC/FPC (ZIF) 45P | | R025 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| * CN002 | 1-785-379-01 | HOUSING, CONNECTOR 4P | | R026 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| CN003 | 1-778-506-21 | PIN, CONNECTOR (PC BOARD) 2P | | R027 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| CN004 | 1-779-064-11 | PIN, CONNECTOR (PC BOARD) 12P | | R029 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W (TRV320E: AEP, UK, EE, NE, RU) |
| CN005 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | | R030 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| CN006 | 1-779-334-11 | CONNECTOR, FFC/FPC 20P (TRV320E: AEP, UK, EE, NE, RU) | | R031 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| * CN007 | 1-778-283-11 | CONNECTOR, FFC/FPC 4P (TRV320/TRV320E: E, HK, AUS, CN/TRV320P) | | R032 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| * CN008 | 1-580-055-21 | PIN, CONNECTOR (SMD) 2P | | R038 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| < DIODE > | | | | R039 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| D001 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | | R040 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| D005 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R043 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W (TRV320E: AEP, UK, EE, NE, RU) |
| D006 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R044 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W (TRV320E: AEP, UK, EE, NE, RU) |
| D008 | 8-719-027-76 | DIODE 1SS357-TPH3 | | R045 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W (TRV320E: AEP, UK, EE, NE, RU) |
| D009 | 8-719-016-74 | DIODE 1SS352-TPH3 | | R048 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| < COIL > | | | | R051 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W (TRV320E: AEP, UK, EE, NE, RU) |
| L001 | 1-469-525-91 | INDUCTOR 10uH (TRV320E: AEP, UK, EE, NE, RU) | | R052 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| L002 | 1-469-525-91 | INDUCTOR 10uH (TRV320E: AEP, UK, EE, NE, RU) | | R053 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| L003 | 1-469-525-91 | INDUCTOR 10uH (TRV320E: AEP, UK, EE, NE, RU) | | R054 | 1-216-814-11 | METAL CHIP 270 5% | 1/16W |
| < TRANSISTOR > | | | | < SWITCH > | | | |
| Q002 | 8-729-230-63 | TRANSISTOR 2SC4116YG-TE85L | | S001 | 1-771-138-61 | SWITCH, KEY BOARD (DIGITAL EFFECT) | |
| Q003 | 8-729-230-72 | TRANSISTOR 2SA1362-YG-EL | | S002 | 1-771-138-61 | SWITCH, KEY BOARD (+) | |
| < RESISTOR > | | | | S003 | 1-771-138-61 | SWITCH, KEY BOARD (PICTURE EFFECT) | |
| R001 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | S004 | 1-771-138-61 | SWITCH, KEY BOARD (-) | |
| R002 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | S005 | 1-771-138-61 | SWITCH, KEY BOARD (DATA CODE) | |
| R003 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | S006 | 1-771-025-41 | SWITCH, ROTARY (ENCODER) (SEL/PUSH EXEC) | |
| R004 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | S007 | 1-771-138-61 | SWITCH, KEY BOARD (MENU) | |
| R005 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | S008 | 1-771-138-61 | SWITCH, KEY BOARD (INDEX) | |
| R006 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W | S009 | 1-771-138-61 | SWITCH, KEY BOARD (END SEARCH) | |
| R007 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W | S010 | 1-771-138-61 | SWITCH, KEY BOARD (TITLE) | |
| R008 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W | S011 | 1-771-138-61 | SWITCH, KEY BOARD (DELETE) | |
| R009 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W | S012 | 1-771-138-61 | SWITCH, KEY BOARD (⊙) | |
| R010 | 1-216-814-11 | METAL CHIP 270 5% | 1/16W | S013 | 1-771-029-21 | SWITCH, TACTILE (EXPOSURE) | |
| R011 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | S014 | 1-771-138-61 | SWITCH, KEY BOARD (PB ZOOM) | |
| R012 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W | S015 | 1-771-138-61 | SWITCH, KEY BOARD (PLAY) | |
| | | | | S016 | 1-771-138-61 | SWITCH, KEY BOARD (DISPLAY) | |
| | | | | S017 | 1-771-029-21 | SWITCH, TACTILE (PROGRAM AE) | |
| | | | | S018 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY MIX) | |
| | | | | S019 | 1-771-029-21 | SWITCH, TACTILE (BACK LIGHT) | |
| | | | | S020 | 1-771-029-31 | SWITCH, TACTILE (FADER) | |

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|-------------------------------------|--------------|--|--------|--|--------------|---|--------|
| | A-7074-344-A | CF-70 BOARD, COMPLETE (TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | | R002 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| | A-7074-373-A | CF-70 BOARD, COMPLETE (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R003 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| ***** (Ref. No.: 30, 000 Series) | | | | R004 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| < BATTERY HOLDER > | | | | R005 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| BH001 | 1-550-104-11 | HOLDER, BATTERY | | R006 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| < CAPACITOR > | | | | R007 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| C001 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | | R008 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| C009 | 1-164-346-11 | CERAMIC CHIP 1uF 16V (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R009 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| C010 | 1-164-346-11 | CERAMIC CHIP 1uF 16V (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R010 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| C011 | 1-164-346-11 | CERAMIC CHIP 1uF 16V (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R011 | 1-216-814-11 | METAL CHIP 270 5% | 1/16W |
| < CONNECTOR > | | | | R012 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W |
| CN001 | 1-785-760-11 | CONNECTOR, FFC/FPC (ZIF) 45P | | R013 | 1-216-803-11 | METAL CHIP 33 5% | 1/16W |
| * CN002 | 1-778-283-11 | CONNECTOR, FFC/FPC 4P | | R014 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| CN003 | 1-794-057-21 | PIN, CONNECTOR (PC BOARD) 2P | | R015 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| CN004 | 1-794-060-21 | PIN, CONNECTOR (PC BOARD) 12P | | R016 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| CN005 | 1-794-058-21 | PIN, CONNECTOR (PC BOARD) 6P | | R017 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| CN006 | 1-779-334-11 | CONNECTOR, FFC/FPC 20P (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R019 | 1-216-816-11 | METAL CHIP 390 5% | 1/16W |
| * CN007 | 1-778-283-11 | CONNECTOR, FFC/FPC 4P (TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | | R020 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| * CN008 | 1-695-320-21 | PIN, CONNECTOR (1.5mm) (SMD) 2P | | R021 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| < DIODE > | | | | R022 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| D001 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | | R023 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| D002 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R024 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| D005 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R025 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| D006 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R026 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| D008 | 8-719-027-76 | DIODE 1SS357-TPH3 | | R027 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| D009 | 8-719-016-74 | DIODE 1SS352-TPH3 | | R029 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| < COIL > | | | | (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | | |
| L001 | 1-469-525-91 | INDUCTOR 10uH (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R030 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| L002 | 1-469-525-91 | INDUCTOR 10uH (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R031 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| L003 | 1-469-525-91 | INDUCTOR 10uH (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | R033 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| < TRANSISTOR > | | | | R040 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| Q002 | 8-729-230-63 | TRANSISTOR 2SD1819A-QRS-TX | | R041 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| Q003 | 8-729-230-72 | TRANSISTOR 2SA1362-YG-EL | | R042 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| < RESISTOR > | | | | R045 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| R001 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | | |
| | | | | R046 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | | | (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | | |
| | | | | R047 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | | | (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | | |
| | | | | R050 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | | | R051 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | | | (TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E) | | | |
| | | | | R052 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | | | R053 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | | | R054 | 1-216-814-11 | METAL CHIP 270 5% | 1/16W |
| | | | | < SWITCH > | | | |
| | | | | S001 | 1-771-138-61 | SWITCH, KEY BOARD (DIGITAL EFFECT) | |
| | | | | S002 | 1-771-138-61 | SWITCH, KEY BOARD (+) | |
| | | | | S003 | 1-771-138-61 | SWITCH, KEY BOARD (PICTURE EFFECT) | |
| | | | | S004 | 1-771-138-61 | SWITCH, KEY BOARD (-) | |
| | | | | S005 | 1-771-138-61 | SWITCH, KEY BOARD (DATA CODE) | |
| | | | | S006 | 1-771-025-41 | SWITCH, ROTARY (ENCODER) (SEL/PUSH EXEC) | |
| | | | | S007 | 1-771-138-61 | SWITCH, KEY BOARD (MENU) | |
| | | | | S008 | 1-771-138-61 | SWITCH, KEY BOARD (INDEX) | |
| | | | | S009 | 1-771-138-61 | SWITCH, KEY BOARD (END SEARCH) | |

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|---|--------------|------------------------------------|--------|---------------------------------------|-----------------------|------------------------------------|--------|
| S010 | 1-771-138-61 | SWITCH, KEY BOARD (TITLE) | | R006 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| S011 | 1-771-138-61 | SWITCH, KEY BOARD (DELETE) | | R007 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| S012 | 1-771-138-61 | SWITCH, KEY BOARD (Ⓢ) | | R008 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| S013 | 1-771-029-21 | SWITCH, TACTILE (EXPOSURE) | | R009 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| S014 | 1-771-138-61 | SWITCH, KEY BOARD (PB ZOOM) | | R010 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| S015 | 1-771-138-61 | SWITCH, KEY BOARD (PLAY) | | R011 | 1-216-814-11 | METAL CHIP 270 5% | 1/16W |
| S016 | 1-771-138-61 | SWITCH, KEY BOARD (DISPLAY) | | R012 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W |
| S017 | 1-771-029-21 | SWITCH, TACTILE (PROGRAM AE) | | R013 | 1-216-803-11 | METAL CHIP 33 5% | 1/16W |
| S019 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY MIX) | | R014 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| S020 | 1-771-029-21 | SWITCH, TACTILE (BACK LIGHT) | | R015 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| S021 | 1-771-029-31 | SWITCH, TACTILE (FADER) | | R016 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| A-7074-378-A CF-72 BOARD, COMPLETE (TRV720/TRV720E) | | | | R017 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| ***** | | | | R019 | 1-216-816-11 | METAL CHIP 390 5% | 1/16W |
| (Ref. No.: 10, 000 Series) | | | | R020 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| < BATTERY HOLDER > | | | | R021 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| BH001 | 1-550-104-11 | HOLDER, BATTERY | | R022 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| < CAPACITOR > | | | | R024 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| C001 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | | R025 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| C008 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | | R026 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| C009 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | | R029 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| C010 | 1-164-346-11 | CERAMIC CHIP 1uF 16V | | R030 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| < CONNECTOR > | | | | R031 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| CN001 | 1-785-760-11 | CONNECTOR, FFC/FPC (ZIF) 45P | | R040 | 1-216-835-11 | METAL CHIP 15K 5% | 1/16W |
| CN002 | 1-778-283-11 | CONNECTOR, FFC/FPC 4P | | R041 | 1-216-838-11 | METAL CHIP 27K 5% | 1/16W |
| CN003 | 1-794-057-21 | PIN, CONNECTOR (PC BOARD) 2P | | R045 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| CN004 | 1-794-060-21 | PIN, CONNECTOR (PC BOARD) 12P | | R046 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| CN005 | 1-794-058-21 | PIN, CONNECTOR (PC BOARD) 6P | | R047 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| CN006 | 1-779-334-11 | CONNECTOR, FFC/FPC 20P | | R050 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| * CN008 | 1-695-320-21 | PIN, CONNECTOR (1.5mm) (SMD) 2P | | R051 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| CN009 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | | R052 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| < DIODE > | | | | R053 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| D001 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | | R054 | 1-216-814-11 | METAL CHIP 270 5% | 1/16W |
| D002 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | < SWITCH > | | | |
| D005 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | S001 | 1-771-138-61 | SWITCH, KEY BOARD (DIGITAL EFFECT) | |
| D006 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | S002 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY +) | |
| D008 | 8-719-421-27 | DIODE MA728- (K8) .SO | | S003 | 1-771-138-61 | SWITCH, KEY BOARD (PICTURE EFFECT) | |
| D009 | 8-719-016-74 | DIODE 1SS352-TPH3 | | S004 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY -) | |
| < COIL > | | | | S005 | 1-771-138-61 | SWITCH, KEY BOARD (DATA CODE) | |
| L001 | 1-469-525-91 | INDUCTOR 10uH | | S007 | 1-771-138-61 | SWITCH, KEY BOARD (MENU) | |
| L002 | 1-469-525-91 | INDUCTOR 10uH | | S008 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY INDEX) | |
| L003 | 1-469-525-91 | INDUCTOR 10uH | | S009 | 1-771-138-61 | SWITCH, KEY BOARD (END SEARCH) | |
| < TRANSISTOR > | | | | S010 | 1-771-138-61 | SWITCH, KEY BOARD (TITLE) | |
| Q002 | 8-729-230-63 | TRANSISTOR 2SD1819A-QRS-TX | | S011 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY DELETE) | |
| Q003 | 8-729-230-72 | TRANSISTOR 2SA1362-YG-EL | | S012 | 1-771-138-61 | SWITCH, KEY BOARD (Ⓢ) | |
| Q007 | 8-729-045-86 | TRANSISTOR RN2107F (TPL3) | | S014 | 1-771-138-61 | SWITCH, KEY BOARD (PB ZOOM) | |
| < RESISTOR > | | | | S015 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY PLAY) | |
| R001 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | | S016 | 1-771-138-61 | SWITCH, KEY BOARD (DISPLAY) | |
| R002 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | | S019 | 1-771-138-61 | SWITCH, KEY BOARD (MEMORY MIX) | |
| R003 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | | FP-249 BOARD, COMPLETE (Not Supplied) | | | |
| R004 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | | ***** | | | |
| R005 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | | (Ref. No.: 10, 000 Series) | | | |
| < HOLE ELEMENT > | | | | 1-658-214-11 | FP-356 FLEXIBLE BOARD | | |
| H001 | 8-719-061-28 | DIODE HW-105C-FT-V (S REEL SENSOR) | | 3-965-551-01 | HOLDER (S), SENSOR | | |
| H002 | 8-719-061-28 | DIODE HW-105C-FT-V (T REEL SENSOR) | | 3-965-552-01 | HOLDER (T), SENSOR | | |

FP-249

FP-355

FU-138/FU-142/FU-144

KP-009

| Ref. No. | Part No. | Description | Remark |
|--|--------------|--|--------|
| < TRANSISTOR > | | | |
| Q001 | 8-729-907-25 | PHOTO TRANSISTOR PT4850F (TAPE END) | |
| Q002 | 8-729-907-25 | PHOTO TRANSISTOR PT4850F (TAPE TOP) | |
| < SWITCH > | | | |
| S001 | 1-692-614-11 | SWITCH, PUSH (3 KEY) (Hi8 MP, ME/MP, REC PROOF) | |
| S002 | 1-572-688-11 | SWITCH, PUSH (1 KEY) (C LOCK) | |
| 1-658-213-11 FP-355 FLEXIBLE BOARD ***** (Ref. No.: 10, 000 Series) | | | |
| < DIODE > | | | |
| D001 | 8-719-988-42 | DIODE GL453 | |
| A-7074-271-A FU-138 BOARD, COMPLETE (TRV320/TRV320E/TRV320P) | | | |
| A-7074-347-A FU-142 BOARD, COMPLETE (TRV420E/TRV520/TRV520E/ TRV520P/TRV525/TRV620E) | | | |
| A-7074-381-A FU-144 BOARD, COMPLETE (TRV720/TRV720E) ***** (Ref. No.: 10, 000 Series) | | | |
| < CAPACITOR > | | | |
| C251 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C252 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C253 | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% 25V | |
| C255 | 1-119-751-11 | TANTAL. CHIP 22uF 20% 16V | |
| C256 | 1-119-751-11 | TANTAL. CHIP 22uF 20% 16V | |
| C257 | 1-119-751-11 | TANTAL. CHIP 22uF 20% 16V | |
| C261 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| < CONNECTOR > | | | |
| * CN252 | 1-580-756-21 | PIN, CONNECTOR (SMD) 7P | |
| CN253 | 1-691-485-21 | CONNECTOR, FFC/FPC 6P | |
| CN254 | 1-794-174-21 | CONNECTOR BOARD TO BOARD 42P | |
| < DIODE > | | | |
| D251 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | |
| D252 | 8-719-027-76 | DIODE 1SS357-TPH3 | |
| D253 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | |
| D256 | 8-719-027-76 | DIODE 1SS357-TPH3 | |
| D257 | 8-719-016-74 | DIODE 1SS352-TPH3 | |
| D560 | 8-719-016-74 | DIODE 1SS352-TPH3 | |
| < FUSE > | | | |
| △F251 | 1-576-406-21 | FUSE, MICRO (1608) (1.4A/32V) | |
| △F252 | 1-576-406-21 | FUSE, MICRO (1608) (1.4A/32V) | |
| △F254 | 1-576-406-21 | FUSE, MICRO (1608) (1.4A/32V) | |
| △F256 | 1-576-406-21 | FUSE, MICRO (1608) (1.4A/32V) | |
| △F257 | 1-576-406-21 | FUSE, MICRO (1608) (1.4A/32V) | |

| Ref. No. | Part No. | Description | Remark |
|--|--------------|---|--------|
| △F258 | 1-576-406-21 | FUSE, MICRO (1608) (1.4A/32V) | |
| < COIL > | | | |
| L251 | 1-412-056-11 | INDUCTOR CHIP 4.7uH | |
| < TRANSISTOR > | | | |
| Q251 | 8-729-047-68 | TRANSISTOR SSM3K03FE (TPL3) | |
| Q252 | 8-729-051-49 | TRANSISTOR TPC8305 (TE12L) | |
| Q253 | 8-729-804-41 | TRANSISTOR 2SB1122-ST-TD | |
| Q254 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q255 | 8-729-047-68 | TRANSISTOR SSM3K03FE (TPL3) | |
| Q256 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q257 | 8-729-042-56 | TRANSISTOR MGSF3455VT1 | |
| < RESISTOR > | | | |
| R251 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R252 | 1-216-296-91 | SHORT 0 | |
| R253 | 1-216-296-91 | SHORT 0 | |
| R254 | 1-216-853-11 | METAL CHIP 470K 5% 1/16W | |
| R255 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R256 | 1-216-150-91 | RES-CHIP 10 5% 1/8W | |
| R257 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R258 | 1-216-831-11 | METAL CHIP 6.8K 5% 1/16W | |
| R259 | 1-216-841-11 | METAL CHIP 47K 5% 1/16W | |
| R260 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R261 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R263 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| A-7074-382-A KP-009 BOARD, COMPLETE (TRV720/TRV720E) ***** (Ref. No.: 20, 000 Series) | | | |
| < CONNECTOR > | | | |
| CN301 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | |
| < RESISTOR > | | | |
| R301 | 1-216-838-11 | METAL CHIP 27K 5% 1/16W | |
| R302 | 1-216-832-11 | METAL CHIP 8.2K 5% 1/16W | |
| R303 | 1-216-828-11 | METAL CHIP 3.9K 5% 1/16W | |
| R304 | 1-216-825-11 | METAL CHIP 2.2K 5% 1/16W | |
| < SWITCH > | | | |
| S301 | 1-771-029-31 | SWITCH, TACTILE (FADER) | |
| S302 | 1-771-029-21 | SWITCH, TACTILE (BACK LIGHT) | |
| S303 | 1-771-029-21 | SWITCH, TACTILE (PROGRAM AE) | |
| S304 | 1-771-029-21 | SWITCH, TACTILE (EXPOSURE) | |
| S305 | 1-771-025-41 | SWITCH, ROTARY (ENCODER) (SEL/PUSH EXEC) | |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark |
|--------------|----------|---|--------|
| A-7074-192-A | LB-62 | BOARD, COMPLETE (TRV525/TRV620E/TRV720/TRV720E) | |
| A-7074-351-A | LB-62 | BOARD, COMPLETE (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |

(Ref. No.: 20, 000 Series)

< CAPACITOR >

| | | | | | |
|-------|--------------|--------------|----------|-----|------|
| C4601 | 1-113-682-11 | TANTAL. CHIP | 33uF | 20% | 10V |
| C4602 | 1-127-760-91 | CERAMIC CHIP | 4.7uF | 10% | 6.3V |
| C4603 | 1-115-464-91 | CERAMIC CHIP | 0.0022uF | 10% | 630V |
| C4604 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |

< CONNECTOR >

| | | | |
|--------|--------------|-----------------------------|--|
| CN4601 | 1-764-516-21 | CONNECTOR, FFC/FPC (ZIF) 6P | |
|--------|--------------|-----------------------------|--|

< DIODE >

| | | | |
|-------|--------------|---|--|
| D4602 | 8-719-026-34 | DIODE CL-170UR-CD-T (TALLY) (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |
|-------|--------------|---|--|

< IC >

| | | | |
|--------|--------------|-----------------------|--|
| IC4601 | 8-759-485-79 | IC TC7SET08FU (TE85R) | |
|--------|--------------|-----------------------|--|

< COIL >

| | | | |
|-------|--------------|---------------|------|
| L4601 | 1-412-031-11 | INDUCTOR CHIP | 47uH |
| L4602 | 1-469-525-91 | INDUCTOR | 10uH |

< FLUORESCENT INDICATOR >

| | | | |
|---------|--------------|---|--|
| △ND4601 | 1-517-933-21 | FLUORESCENT TUBE (0.44) (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |
| △ND4601 | 1-517-933-11 | FLUORESCENT TUBE (0.44) (TRV525/TRV620E/TRV720/TRV720E) | |

< TRANSISTOR >

| | | | |
|-------|--------------|----------------------|--|
| Q4601 | 8-729-039-24 | TRANSISTOR FX216-TL1 | |
|-------|--------------|----------------------|--|

< RESISTOR >

| | | | | | |
|-------|--------------|------------|------|----|--|
| R4601 | 1-216-808-11 | METAL CHIP | 82 | 5% | 1/16W |
| R4603 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| | | | | | (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) |
| R4604 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W |

< TRANSFORMER >

| | | | |
|--------|--------------|-----------------------|--|
| △T4601 | 1-435-225-21 | TRANSFORMER, INVERTER | |
|--------|--------------|-----------------------|--|

| Ref. No. | Part No. | Description | Remark |
|--------------|----------|--|--------|
| A-7074-421-A | MI-37 | BOARD, COMPLETE (TRV320E/TRV420E/TRV520E/ TRV620E/TRV720E) | |
| A-7074-267-A | MI-37 | BOARD, COMPLETE (TRV320/TRV320P/TRV520/ TRV520P/TRV525/TRV720) | |

(Ref. No.: 10, 000 Series)

< CAPACITOR >

| | | | | | |
|-------|--------------|---------------|---------|--------|---|
| C3900 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C3901 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| | | | | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) |
| C3902 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| | | | | | (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) |
| C3903 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| | | | | | (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) |
| C3904 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3905 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C3906 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C3907 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3908 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3909 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3910 | 1-119-660-11 | TANTAL. CHIP | 4.7uF | 20% | 6.3V |
| C3911 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3912 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3913 | 1-164-668-11 | CERAMIC CHIP | 510PF | 5% | 50V |
| C3914 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C3915 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3916 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3917 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C3918 | 1-164-844-11 | CERAMIC CHIP | 4PF | 0.25PF | 16V |
| C3919 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C3920 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C3921 | 1-164-862-11 | CERAMIC CHIP | 33PF | 5% | 16V |
| C3922 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3923 | 1-164-864-11 | CERAMIC CHIP | 39PF | 5% | 16V |
| C3924 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3925 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C3926 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3927 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3928 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V |
| C3929 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3931 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3933 | 1-107-686-11 | TANTAL. CHIP | 4.7uF | 20% | 16V |
| C3934 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3935 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3936 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C5806 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C5807 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V |
| C5808 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V |
| C5809 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C5810 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C5812 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |
| C5813 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 16V |
| C5814 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C5815 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

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| Ref. No. | Part No. | Description | Remark |
|---------------|--------------|---|--------|
| C5816 | 1-164-874-11 | CERAMIC CHIP 100PF 5% 16V | |
| C5817 | 1-164-937-11 | CERAMIC CHIP 0.001uF 10% 16V | |
| C5818 | 1-107-819-11 | CERAMIC CHIP 0.022uF 10% 16V (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| C5819 | 1-164-874-11 | CERAMIC CHIP 100PF 5% 16V | |
| C5820 | 1-164-874-11 | CERAMIC CHIP 100PF 5% 16V | |
| C5821 | 1-107-819-11 | CERAMIC CHIP 0.022uF 10% 16V (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| C5822 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | |
| C5823 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | |
| C5824 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | |
| C5825 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | |
| C5826 | 1-110-563-11 | CERAMIC CHIP 0.068uF 10% 16V | |
| C5827 | 1-110-563-11 | CERAMIC CHIP 0.068uF 10% 16V | |
| C5829 | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% 25V | |
| C5830 | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% 25V | |
| C5832 | 1-164-245-11 | CERAMIC CHIP 0.015uF 10% 25V | |
| C5833 | 1-164-941-11 | CERAMIC CHIP 0.0047uF 10% 16V | |
| C5835 | 1-164-941-11 | CERAMIC CHIP 0.0047uF 10% 16V | |
| C5836 | 1-164-245-11 | CERAMIC CHIP 0.015uF 10% 25V | |
| C5838 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | |
| C5839 | 1-104-847-11 | TANTAL. CHIP 22uF 20% 4V | |
| C5840 | 1-165-128-11 | CERAMIC CHIP 0.22uF 16V | |
| C5841 | 1-125-837-91 | CERAMIC CHIP 1uF 10% 6.3V (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | |
| C5841 | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% 25V (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| C5842 | 1-125-837-91 | CERAMIC CHIP 1uF 10% 6.3V (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| C5843 | 1-125-837-91 | CERAMIC CHIP 1uF 10% 6.3V (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| C5844 | 1-125-837-91 | CERAMIC CHIP 1uF 10% 6.3V (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| < CONNECTOR > | | | |
| CN5801 | 1-766-344-21 | CONNECTOR, FFC/FPC 14P | |
| * CN5802 | 1-695-320-21 | PIN, CONNECTOR (1.5mm) (SMD) 2P | |
| * CN5803 | 1-695-320-21 | PIN, CONNECTOR (1.5mm) (SMD) 2P | |
| CN5804 | 1-794-053-21 | CONNECTOR, FFC/FPC (LIF) 32P | |
| < DIODE > | | | |
| D3900 | 8-719-073-01 | DIODE MA111- (K8) .S0 | |
| D3901 | 8-719-074-30 | DIODE SML-310LTT86 (TALLY) | |
| D3903 | 8-719-060-65 | DIODE DAC3825 (LASER AV LINK) | |
| D3904 | 8-719-078-23 | DIODE DCR2815 (LASER AV LINK) | |
| D5806 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | |
| D5807 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | |
| < FUSE > | | | |
| △F3900 | 1-533-874-11 | FUSE, MICRO (200mA/24V) | |

| Ref. No. | Part No. | Description | Remark |
|----------------|--------------|--|--------|
| < IC > | | | |
| IC3900 | 8-749-012-83 | IC PNA4S13M01S0 | |
| IC3901 | 8-759-498-52 | IC LA9511W-TBM (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | |
| IC3901 | 8-759-566-96 | IC AN2920FHQ-EB (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| IC5801 | 8-759-638-50 | IC AN2901FHQ-EB (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | |
| IC5801 | 8-759-679-11 | IC BH7870AKV-E2 (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| < COIL > | | | |
| L3900 | 1-469-525-91 | INDUCTOR 10uH | |
| L3901 | 1-469-525-91 | INDUCTOR 10uH | |
| L3902 | 1-412-948-11 | INDUCTOR 5.6uH | |
| L3903 | 1-412-957-11 | INDUCTOR 33uH | |
| L3904 | 1-412-957-11 | INDUCTOR 33uH | |
| L5803 | 1-412-961-11 | INDUCTOR 68uH | |
| < TRANSISTOR > | | | |
| Q3901 | 8-729-140-75 | TRANSISTOR 2SD999-T1-CLCK | |
| Q3902 | 8-729-122-63 | TRANSISTOR 2SA1226-T1E4 | |
| Q3903 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| < RESISTOR > | | | |
| R3900 | 1-218-990-11 | SHORT 0 | |
| R3901 | 1-218-951-11 | RES-CHIP 680 5% 1/16W | |
| R3902 | 1-216-001-00 | METAL CHIP 10 5% 1/10W | |
| R3903 | 1-218-968-11 | RES-CHIP 18K 5% 1/16W | |
| R3904 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| R3905 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| R3906 | 1-216-800-11 | RES-CHIP 18 5% 1/16W | |
| R3908 | 1-218-967-11 | RES-CHIP 15K 5% 1/16W | |
| R3909 | 1-218-989-11 | RES-CHIP 1M 5% 1/16W | |
| R3910 | 1-218-990-11 | SHORT 0 | |
| R3911 | 1-208-715-11 | METAL CHIP 22K 0.5% 1/16W | |
| R3912 | 1-218-947-11 | RES-CHIP 330 5% 1/16W | |
| R3913 | 1-218-953-11 | RES-CHIP 1K 5% 1/16W | |
| R3916 | 1-218-949-11 | RES-CHIP 470 5% 1/16W | |
| R3917 | 1-218-979-11 | RES-CHIP 150K 5% 1/16W | |
| R3918 | 1-218-979-11 | RES-CHIP 150K 5% 1/16W | |
| R3919 | 1-218-950-11 | RES-CHIP 560 5% 1/16W | |
| R3920 | 1-218-963-11 | RES-CHIP 6.8K 5% 1/16W | |
| R3921 | 1-218-949-11 | RES-CHIP 470 5% 1/16W | |
| R3922 | 1-218-972-11 | RES-CHIP 39K 5% 1/16W | |
| R3923 | 1-218-949-11 | RES-CHIP 470 5% 1/16W | |
| R3924 | 1-218-949-11 | RES-CHIP 470 5% 1/16W | |
| R3936 | 1-218-955-11 | RES-CHIP 1.5K 5% 1/16W | |
| R3938 | 1-218-990-11 | SHORT 0 | |
| R3939 | 1-218-990-11 | SHORT 0 | |
| R5801 | 1-218-971-11 | RES-CHIP 33K 5% 1/16W | |
| R5802 | 1-218-968-11 | RES-CHIP 18K 5% 1/16W | |
| R5803 | 1-218-957-11 | RES-CHIP 2.2K 5% 1/16W | |
| R5804 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5805 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |

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| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|---|--------|-----|-------|----------|--------------|-----------------------|----------|--------|------|
| R5806 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | C105 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| R5807 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W | C106 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5809 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | C108 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5814 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W | C109 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5815 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | C110 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5816 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | C111 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5817 | 1-218-962-11 | RES-CHIP | 5.6K | 5% | 1/16W | C112 | 1-164-846-11 | CERAMIC CHIP | 6PF | 0.50PF | 16V |
| R5818 | 1-218-962-11 | RES-CHIP | 5.6K | 5% | 1/16W | C113 | 1-164-847-11 | CERAMIC CHIP | 7PF | 0.50PF | 16V |
| R5819 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W | C114 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5820 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | C115 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5821 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W | C116 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| R5822 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | C117 | 1-801-862-11 | VARISTOR, CHIP (Note) | | | |
| R5823 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W | C118 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| R5824 | 1-218-990-11 | SHORT | 0 | | | C119 | 1-801-862-11 | VARISTOR, CHIP (Note) | | | |
| R5825 | 1-218-990-11 | SHORT | 0 | | | C120 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| R5826 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W | C121 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5827 | 1-218-968-11 | RES-CHIP | 18K | 5% | 1/16W | C122 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5828 | 1-218-968-11 | RES-CHIP | 18K | 5% | 1/16W | C123 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5829 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W | C125 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5830 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | C126 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | C127 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5831 | 1-218-990-11 | SHORT | 0 | | | C128 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | | | | C129 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5831 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | C130 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | C131 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5834 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | C132 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | | | | C133 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5834 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | C134 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | C135 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| R5835 | 1-218-990-11 | SHORT | 0 | | | C136 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5836 | 1-218-990-11 | SHORT | 0 | | | C137 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| R5837 | 1-218-990-11 | SHORT | 0 | | | C138 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5840 | 1-218-990-11 | SHORT | 0 | | | C140 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5841 | 1-218-990-11 | SHORT | 0 | | | C141 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5845 | 1-218-947-11 | RES-CHIP | 330 | 5% | 1/16W | C142 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5846 | 1-218-990-11 | SHORT | 0 | | | C143 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | C144 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| R5847 | 1-218-990-11 | SHORT | 0 | | | C145 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | C146 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| | | < VARISTOR > | | | | C147 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| VDR801 | 1-801-862-11 | VARISTOR, CHIP | | | | C148 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| VDR803 | 1-801-862-11 | VARISTOR, CHIP | | | | C150 | 1-119-750-11 | TANTAL. CHIP | 22uF | 20% | 6.3V |
| | | | | | | C151 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | | | | | C154 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| | | | | | | C155 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| | | | | | | C156 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| | | | | | | C157 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | | | | | C158 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | | | | | C159 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | | | | | C701 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| | | | | | | C702 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 16V |
| | | | | | | C703 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| | | | | | | C704 | 1-119-923-81 | CERAMIC CHIP | 0.047uF | 10% | 10V |
| | | | | | | C705 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| | | | | | | C706 | 1-164-878-11 | CERAMIC CHIP | 150PF | 5% | 16V |
| | | | | | | C707 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V |
| | | | | | | C708 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V |
| C101 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V | | | | | | |
| C102 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V | | | | | | |
| C104 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V | | | | | | |

A-7074-328-A PC-77 BOARD, COMPLETE

(Ref. No.: 30, 000 Series)

< CAPACITOR >

Note: Varistors are mounted to the location where C117, 119 are printed

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|------------------|--------------|--------------------------------|--------|--------------|--------------|---------------------------------|--------|
| C710 | 1-104-851-11 | TANTAL. CHIP 10uF 20% 10V | | Q105 | 8-729-045-75 | TRANSISTOR RN1107F (TPL3) | |
| C711 | 1-164-935-11 | CERAMIC CHIP 470PF 10% 16V | | Q106 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| C712 | 1-164-939-11 | CERAMIC CHIP 0.0022uF 10% 16V | | Q701 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| C713 | 1-164-942-11 | CERAMIC CHIP 0.0068uF 10% 16V | | Q702 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| C714 | 1-110-563-11 | CERAMIC CHIP 0.068uF 10% 16V | | < RESISTOR > | | | |
| C715 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | | R102 | 1-218-973-11 | RES-CHIP 47K 5% 1/16W | |
| C717 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% 10V | | R103 | 1-218-990-11 | SHORT 0 | |
| C718 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% 10V | | R104 | 1-218-953-11 | RES-CHIP 1K 5% 1/16W | |
| C720 | 1-104-851-11 | TANTAL. CHIP 10uF 20% 10V | | R105 | 1-218-990-11 | SHORT 0 | |
| C721 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | | R106 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| C722 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | | R107 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| C727 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% 10V | | R108 | 1-218-973-11 | RES-CHIP 47K 5% 1/16W | |
| C728 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% 10V | | R109 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| C801 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | | R110 | 1-218-989-11 | RES-CHIP 1M 5% 1/16W | |
| C802 | 1-125-777-11 | CERAMIC CHIP 0.1uF 10% 10V | | R111 | 1-218-990-11 | SHORT 0 | |
| < CONNECTOR > | | | | R112 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| CN801 | 1-573-350-11 | CONNECTOR, FFC/FPC 10P | | R113 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| CN802 | 1-774-603-21 | CONNECTOR, BOARD TO BOARD 100P | | R114 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| < DIODE > | | | | R117 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| D101 | 8-719-016-74 | DIODE 1SS352-TPH3 | | R118 | 1-218-990-11 | SHORT 0 | |
| D102 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R119 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| D103 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R120 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| D104 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | R121 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| < FERRITE BEAD > | | | | R122 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| FB101 | 1-414-813-11 | FERRITE 0uH | | R123 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| FB102 | 1-414-813-11 | FERRITE 0uH | | R124 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| FB103 | 1-414-813-11 | FERRITE 0uH | | R125 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| FB104 | 1-414-813-11 | FERRITE 0uH | | R126 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| FB105 | 1-414-813-11 | FERRITE 0uH | | R128 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| FB106 | 1-414-813-11 | FERRITE 0uH | | R129 | 1-218-953-11 | RES-CHIP 1K 5% 1/16W | |
| FB107 | 1-414-813-11 | FERRITE 0uH | | R130 | 1-218-973-11 | RES-CHIP 47K 5% 1/16W | |
| FB801 | 1-500-282-11 | INDUCTOR CHIP 0uH | | R131 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| < IC > | | | | R133 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| IC103 | 8-759-234-20 | IC TC7S08F (TE85R) | | R134 | 1-218-953-11 | RES-CHIP 1K 5% 1/16W | |
| IC104 | 8-759-495-15 | IC uPD4721GS-GJG-E2 | | R135 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| IC105 | 8-759-668-50 | IC HD6417197F77 | | R136 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| IC107 | 8-759-656-23 | IC MB81F161622C-80FN | | R137 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| IC108 | 8-759-657-96 | IC MB87J1802PFF-G-BND-ER | | R138 | 1-218-961-11 | RES-CHIP 4.7K 5% 1/16W | |
| IC109 | 8-759-682-51 | IC MBM29LV400BC-90PFTN-S108-ER | | R139 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| IC701 | 8-759-492-30 | IC MB3817PFV-G-BND | | R140 | 1-218-959-11 | RES-CHIP 3.3K 5% 1/16W | |
| IC702 | 8-759-492-30 | IC MB3817PFV-G-BND | | R141 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| < COIL > | | | | R142 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L101 | 1-216-295-91 | SHORT 0 | | R143 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L102 | 1-469-525-91 | INDUCTOR 10uH | | R144 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L701 | 1-412-056-11 | INDUCTOR 4.7uH | | R145 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L702 | 1-416-345-11 | INDUCTOR 22uH | | R146 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L703 | 1-412-056-11 | INDUCTOR 4.7uH | | R147 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L704 | 1-412-056-11 | INDUCTOR 4.7uH | | R148 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L705 | 1-416-345-11 | INDUCTOR 22uH | | R149 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| L706 | 1-412-056-11 | INDUCTOR 4.7uH | | R150 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| < TRANSISTOR > | | | | R151 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| Q101 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | | R154 | 1-218-990-11 | SHORT 0 | |
| Q102 | 8-729-037-61 | TRANSISTOR RN2104F (TPL3) | | R156 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| Q103 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | | R157 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| Q104 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | | R158 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W | |
| | | | | R159 | 1-218-990-11 | SHORT 0 | |
| | | | | R160 | 1-218-990-11 | SHORT 0 | |
| | | | | R162 | 1-218-990-11 | SHORT 0 | |
| | | | | R163 | 1-218-959-11 | RES-CHIP 3.3K 5% 1/16W | |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|--------------|------------------------|-------------------------------|--------|------|----------------------------|----------|--------------|-------------------------------|---------------------------|-----|-----|
| R164 | 1-218-990-11 | SHORT | 0 | | | C5522 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| R165 | 1-218-990-11 | SHORT | 0 | | | C5523 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| R166 | 1-218-990-11 | SHORT | 0 | | | C5524 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| R167 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | C5527 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| R168 | 1-218-990-11 | SHORT | 0 | | | C5528 | 1-135-177-21 | TANTALUM CHIP | 1uF | 20% | 25V |
| R170 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | C5529 | 1-107-725-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| | | | | | | C5530 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| R172 | 1-218-990-11 | SHORT | 0 | | | C5531 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| R701 | 1-218-943-11 | RES-CHIP | 150 | 5% | 1/16W | C5602 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V |
| R702 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | | | | | | |
| R703 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W | C5603 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| R704 | 1-218-887-11 | METAL CHIP | 47K | 0.5% | 1/16W | C5604 | 1-164-657-11 | CERAMIC CHIP | 0.015uF | 10% | 50V |
| | | | | | | C5605 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| R706 | 1-218-887-11 | METAL CHIP | 47K | 0.5% | 1/16W | C5606 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| R707 | 1-218-867-11 | METAL CHIP | 6.8K | 0.5% | 1/16W | △C5607 | 1-131-959-91 | CERAMIC CHIP | 12PF | 10% | 3KV |
| R708 | 1-218-943-11 | RES-CHIP | 150 | 5% | 1/16W | | | | | | |
| R709 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | C5608 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V |
| R711 | 1-218-905-11 | METAL CHIP | 270K | 0.5% | 1/16W | C5704 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| | | | | | | | | < CONNECTOR > | | | |
| R713 | 1-218-887-11 | METAL CHIP | 47K | 0.5% | 1/16W | CN5501 | 1-573-364-11 | CONNECTOR, FFC/FPC 24P | | | |
| R714 | 1-218-883-11 | METAL CHIP | 33K | 0.5% | 1/16W | * CN5502 | 1-573-984-11 | CONNECTOR, BOARD TO BOARD 10P | | | |
| R715 | 1-218-990-11 | SHORT | 0 | | | CN5604 | 1-764-709-11 | CONNECTOR, FFC/FPC (LIF) 10P | | | |
| R716 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | CN5701 | 1-779-893-11 | PIN, CONNECTOR (PC BOARD) 8P | | | |
| R801 | 1-218-942-11 | RES-CHIP | 120 | 5% | 1/16W | CN5702 | 1-779-064-11 | PIN, CONNECTOR (PC BOARD) 12P | | | |
| | | | | | | | | | | | |
| R802 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | CN5703 | 1-691-344-11 | CONNECTOR, FFC/FPC (ZIF) 6P | | | |
| | | < VIBRATOR > | | | | CN5704 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | | | |
| X101 | 1-781-762-21 | VIBRATOR, CRYSTAL (25.8048Hz) | | | | CN5705 | 1-764-532-21 | CONNECTOR, FFC/FPC (ZIF) 26P | | | |
| | | | | | | | | < DIODE > | | | |
| A-7074-272-A | PD-117 BOARD, COMPLETE | | | | | D5502 | 8-713-102-80 | DIODE | 1T369-01-T8A | | |
| | | | | | (2.5 LCD TYPE S 61K) | D5503 | 8-719-073-01 | DIODE | MA111- (K8) .SO | | |
| A-7074-280-A | PD-117 BOARD, COMPLETE | | | | | △D5601 | 8-719-073-01 | DIODE | MA111- (K8) .SO | | |
| | | | | | (2.5 LCD TYPE S 123K) | D5602 | 8-719-062-44 | DIODE | PG1112H-TR (STARTER) | | |
| | | ***** | | | | | | < FERRITE BEAD > | | | |
| | | | | | (Ref. No.: 20, 000 Series) | | | | | | |
| | | < CAPACITOR > | | | | FB5502 | 1-414-760-21 | FERRITE | 0uH | | |
| C5501 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | FB5503 | 1-414-760-21 | FERRITE | 0uH | | |
| C5503 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | | | < IC > | | | |
| C5504 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | IC5501 | 8-759-660-92 | IC | RB5P003AM1 | | |
| C5505 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | IC5502 | 8-759-660-91 | IC | LZ9FF424 | | |
| C5506 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | IC5503 | 8-759-478-92 | IC | TC7SET04FU (TE85R) | | |
| | | | | | | IC5601 | 8-759-564-49 | IC | TC7W53FU (TE12R) | | |
| C5507 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | IC5602 | 8-759-075-70 | IC | TA75S393F-TE85R | | |
| C5508 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | | | | | | |
| C5509 | 1-107-687-11 | TANTAL. CHIP | 3.3uF | 20% | 20V | IC5701 | 8-759-573-02 | IC | BU9735K-E2 | | |
| C5510 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | | | < COIL > | | | |
| C5511 | 1-164-739-11 | CERAMIC CHIP | 560PF | 5% | 50V | L5501 | 1-469-525-91 | INDUCTOR | 10uH | | |
| | | | | | | L5504 | 1-469-525-91 | INDUCTOR | 10uH | | |
| C5512 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | L5505 | 1-412-956-21 | INDUCTOR | 27uH (2.5 LCD TYPE S 61K) | | |
| C5513 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | L5505 | 1-412-949-21 | INDUCTOR | 6.8uH | | |
| C5514 | 1-119-750-11 | TANTAL. CHIP | 22uF | 20% | 6.3V | | | (2.5 LCD TYPE S 123K) | | | |
| C5515 | 1-164-357-11 | CERAMIC CHIP | 1000PF | 5% | 50V | L5601 | 1-419-387-21 | INDUCTOR | 100uH | | |
| C5516 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V | | | < TRANSISTOR > | | | |
| | | | | | (2.5 LCD TYPE S 61K) | | | | | | |
| C5516 | 1-162-925-11 | CERAMIC CHIP | 68PF | 5% | 50V | Q5501 | 8-729-037-52 | TRANSISTOR | 2SC4738F-Y/GR (TPL3) | | |
| | | | | | (2.5 LCD TYPE S 123K) | Q5502 | 8-729-041-23 | TRANSISTOR | MG5F1P02LT1 | | |
| C5517 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | Q5503 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8) .SO | | |
| C5518 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | Q5504 | 8-729-037-53 | TRANSISTOR | 2SB1462J-QR (K8) .SO | | |
| C5519 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V | | | | | | |
| C5520 | 1-113-994-11 | TANTAL. CHIP | 6.8uF | 20% | 16V | | | | | | |
| | | | | | | | | | | | |
| C5521 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V | | | | | | |

The components identified by mark △ or dotted line with * are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-117 (2.5 LCD TYPE S 61K)/PD-117 (2.5 LCD TYPE S 123K)**PD-117 (2.5 LCD TYPE C 61K)**

| Ref. No. | Part No. | Description | Remark | | |
|--------------|--------------|-------------|----------------------|----------------------|-------|
| Q5505 | 8-729-037-52 | TRANSISTOR | 2SC4738F-Y/GR (TPL3) | | |
| Q5506 | 8-729-037-52 | TRANSISTOR | 2SC4738F-Y/GR (TPL3) | | |
| Q5601 | 8-729-042-29 | TRANSISTOR | RN1104F (TPL3) | | |
| Q5602 | 8-729-039-43 | TRANSISTOR | FP216-TL | | |
| Q5603 | 8-729-042-29 | TRANSISTOR | RN1104F (TPL3) | | |
| Q5604 | 8-729-042-58 | TRANSISTOR | RN2102F (TPL3) | | |
| < RESISTOR > | | | | | |
| R5501 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W |
| R5503 | 1-218-895-11 | METAL CHIP | 100K | 0.5% | 1/16W |
| R5504 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |
| R5505 | 1-216-835-11 | METAL CHIP | 15K | 5% | 1/16W |
| R5506 | 1-216-826-11 | METAL CHIP | 2.7K | 5% | 1/16W |
| R5507 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R5508 | 1-216-843-11 | METAL CHIP | 68K | 5% | 1/16W |
| R5509 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W |
| R5510 | 1-216-843-11 | METAL CHIP | 68K | 5% | 1/16W |
| R5511 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R5512 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |
| R5513 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R5515 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5516 | 1-216-833-91 | RES-CHIP | 10K | 5% | 1/16W |
| R5519 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5520 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5521 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5523 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W |
| R5524 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W |
| R5525 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/16W |
| R5551 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R5553 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/16W |
| R5553 | 1-216-825-11 | METAL CHIP | 2.2K | (2.5 LCD TYPE S 61K | 1/16W |
| | | | | (2.5 LCD TYPE S 123K | 1/16W |
| R5557 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5560 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/16W |
| R5562 | 1-216-833-91 | RES-CHIP | 10K | 5% | 1/16W |
| R5563 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/16W |
| R5564 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R5565 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/16W |
| R5569 | 1-216-848-11 | METAL CHIP | 180K | 5% | 1/16W |
| R5608 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5609 | 1-216-833-91 | RES-CHIP | 10K | 5% | 1/16W |
| R5610 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R5611 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/16W |
| R5612 | 1-216-834-11 | METAL CHIP | 12K | 5% | 1/16W |
| R5613 | 1-216-055-00 | METAL CHIP | 1.8K | 5% | 1/10W |
| R5614 | 1-216-833-91 | RES-CHIP | 10K | 5% | 1/16W |
| R5616 | 1-216-810-11 | METAL CHIP | 120 | 5% | 1/16W |
| R5617 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/16W |
| R5618 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/16W |
| R5702 | 1-216-822-11 | METAL CHIP | 1.2K | 5% | 1/16W |
| R5704 | 1-216-823-11 | METAL CHIP | 1.5K | 5% | 1/16W |
| R5706 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/16W |
| R5707 | 1-216-828-11 | METAL CHIP | 3.9K | 5% | 1/16W |
| R5708 | 1-216-832-11 | METAL CHIP | 8.2K | 5% | 1/16W |
| R5711 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R5712 | 1-216-855-11 | METAL CHIP | 680K | 5% | 1/16W |
| R5714 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |

| Ref. No. | Part No. | Description | Remark | | |
|-------------------------------------|--------------|--------------------------------|---------|-----|------|
| < SWITCH > | | | | | |
| S5701 | 1-692-088-41 | SWITCH, TACTILE (LCD BRIGHT +) | | | |
| S5702 | 1-692-088-41 | SWITCH, TACTILE (LCD BRIGHT -) | | | |
| S5703 | 1-692-088-41 | SWITCH, TACTILE (VOLUME +) | | | |
| S5704 | 1-692-088-41 | SWITCH, TACTILE (VOLUME -) | | | |
| < TRANSFORMER > | | | | | |
| △ T5601 | 1-435-226-11 | TRANSFORMER, INVERTER | | | |
| A-7074-290-A PD-117 BOARD, COMPLETE | | | | | |
| (2.5 LCD TYPE C 61K) | | | | | |
| ***** | | | | | |
| (Ref. No.: 20, 000 Series) | | | | | |
| < CAPACITOR > | | | | | |
| C5501 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C5503 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5504 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5505 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C5506 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C5507 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C5508 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5509 | 1-107-687-11 | TANTAL. CHIP | 3.3uF | 20% | 20V |
| C5510 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5511 | 1-164-739-11 | CERAMIC CHIP | 560PF | 5% | 50V |
| C5512 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5513 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5514 | 1-119-750-11 | TANTAL. CHIP | 22uF | 20% | 6.3V |
| C5515 | 1-164-357-11 | CERAMIC CHIP | 1000PF | 5% | 50V |
| C5516 | 1-164-217-11 | CERAMIC CHIP | 150PF | 5% | 50V |
| C5517 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C5518 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C5519 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C5520 | 1-113-994-11 | TANTAL. CHIP | 6.8uF | 20% | 16V |
| C5521 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| C5522 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5523 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5524 | 1-107-682-11 | CERAMIC CHIP | 1uF | 10% | 16V |
| C5527 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C5529 | 1-107-725-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5602 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V |
| C5603 | 1-109-982-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C5604 | 1-164-657-11 | CERAMIC CHIP | 0.015uF | 10% | 50V |
| C5605 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C5606 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| △ C5607 | 1-131-959-91 | CERAMIC CHIP | 12PF | 10% | 3KV |
| C5608 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V |
| C5704 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |

| | | | | | |
|---------------|--------------|-------------------------------|--|--|--|
| < CONNECTOR > | | | | | |
| CN5501 | 1-573-364-11 | CONNECTOR, FFC/FPC 24P | | | |
| * CN5502 | 1-573-984-11 | CONNECTOR, BOARD TO BOARD 10P | | | |
| CN5604 | 1-764-709-11 | CONNECTOR, FFC/FPC (LIF) 10P | | | |
| CN5701 | 1-779-893-11 | PIN, CONNECTOR (PC BOARD) 8P | | | |
| CN5702 | 1-779-064-11 | PIN, CONNECTOR (PC BOARD) 12P | | | |
| CN5703 | 1-691-344-11 | CONNECTOR, FFC/FPC (ZIF) 6P | | | |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-118 (3 LCD TYPE S)/PD-118 (3.5 LCD TYPE S)/PD-118 (4 LCD TYPE S)

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---------------------------------|--------|----------|--------------|--------------------|--------|
| CN5704 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | | R5560 | 1-216-853-11 | METAL CHIP 470K 5% | 1/16W |
| CN5705 | 1-764-532-21 | CONNECTOR, FFC/FPC (ZIF) 26P | | R5566 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | < DIODE > | | R5567 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| D5502 | 8-713-102-80 | DIODE 1T369-01-T8A | | R5568 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| △D5601 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | R5608 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| D5602 | 8-719-062-44 | DIODE PG1112H-TR (STARTER) | | | | | |
| | | < FERRITE BEAD > | | R5609 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| FB5502 | 1-414-760-21 | FERRITE 0uH | | R5610 | 1-216-055-00 | METAL CHIP 1.8K 5% | 1/10W |
| FB5503 | 1-414-760-21 | FERRITE 0uH | | R5611 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W |
| | | < IC > | | R5612 | 1-216-834-11 | METAL CHIP 12K 5% | 1/16W |
| IC5501 | 8-759-660-92 | IC RB5P003AM1 | | R5613 | 1-216-055-00 | METAL CHIP 1.8K 5% | 1/10W |
| IC5502 | 8-759-591-93 | IC CM7019L3-T4 | | | | | |
| IC5601 | 8-759-564-49 | IC TC7W53FU (TE12R) | | R5614 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| IC5602 | 8-759-075-70 | IC TA75S393F-TE85R | | R5616 | 1-216-810-11 | METAL CHIP 120 5% | 1/16W |
| IC5701 | 8-759-573-02 | IC BU9735K-E2 | | R5617 | 1-216-837-11 | METAL CHIP 22K 5% | 1/16W |
| | | < COIL > | | R5618 | 1-216-817-11 | METAL CHIP 470 5% | 1/16W |
| L5501 | 1-469-525-91 | INDUCTOR 10uH | | R5702 | 1-216-822-11 | METAL CHIP 1.2K 5% | 1/16W |
| L5504 | 1-469-525-91 | INDUCTOR 10uH | | | | | |
| L5505 | 1-412-956-21 | INDUCTOR 27uH | | R5704 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| L5601 | 1-419-387-21 | INDUCTOR 100uH | | R5706 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| | | < TRANSISTOR > | | R5707 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| Q5501 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | | R5708 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| Q5601 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | | R5711 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| Q5602 | 8-729-039-43 | TRANSISTOR FP216-TL | | | | | |
| Q5603 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | | R5712 | 1-216-855-11 | METAL CHIP 680K 5% | 1/16W |
| Q5604 | 8-729-042-58 | TRANSISTOR RN2102F (TPL3) | | R5714 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| | | < RESISTOR > | | | | | |
| R5501 | 1-216-853-11 | METAL CHIP 470K 5% | 1/16W | | | | |
| R5503 | 1-218-895-11 | METAL CHIP 100K 0.5% | 1/16W | | | | |
| R5504 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W | | | | |
| R5505 | 1-216-835-11 | METAL CHIP 15K 5% | 1/16W | | | | |
| R5506 | 1-216-826-11 | METAL CHIP 2.7K 5% | 1/16W | | | | |
| | | | | | | | |
| R5507 | 1-216-841-11 | METAL CHIP 47K 5% | 1/16W | | | | |
| R5508 | 1-216-843-11 | METAL CHIP 68K 5% | 1/16W | | | | |
| R5509 | 1-216-837-11 | METAL CHIP 22K 5% | 1/16W | | | | |
| R5510 | 1-216-843-11 | METAL CHIP 68K 5% | 1/16W | | | | |
| R5511 | 1-216-857-11 | METAL CHIP 1M 5% | 1/16W | | | | |
| | | | | | | | |
| R5512 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W | | | | |
| R5514 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |
| R5516 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W | | | | |
| R5517 | 1-216-849-11 | METAL CHIP 220K 5% | 1/16W | | | | |
| R5518 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |
| | | | | | | | |
| R5519 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |
| R5520 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |
| R5522 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |
| R5523 | 1-216-809-11 | METAL CHIP 100 5% | 1/16W | | | | |
| R5524 | 1-216-809-11 | METAL CHIP 100 5% | 1/16W | | | | |
| | | | | | | | |
| R5525 | 1-216-809-11 | METAL CHIP 100 5% | 1/16W | | | | |
| R5551 | 1-216-841-11 | METAL CHIP 47K 5% | 1/16W | | | | |
| R5553 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W | | | | |
| R5557 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |
| R5559 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W | | | | |

△T5601 1-435-226-11 TRANSFORMER, INVERTER

A-7074-374-A PD-118 BOARD, COMPLETE (3 LCD TYPE S)
A-7074-348-A PD-118 BOARD, COMPLETE (3.5 LCD TYPE S)
A-7074-371-A PD-118 BOARD, COMPLETE (4 LCD TYPE S)

(Ref. No.: 30, 000 Series)

< CAPACITOR >

| | | | |
|-------|--------------|-------------------------|------------------|
| C5501 | 1-119-750-11 | TANTAL. CHIP 22uF 20% | 6.3V |
| C5503 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5504 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5505 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C5506 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| | | | |
| C5507 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C5508 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5509 | 1-107-687-11 | TANTAL. CHIP 3.3uF 20% | 20V |
| C5510 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5511 | 1-164-739-11 | CERAMIC CHIP 560PF 5% | 50V |
| | | | |
| C5512 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5513 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5514 | 1-119-750-11 | TANTAL. CHIP 22uF 20% | 6.3V |
| C5515 | 1-164-357-11 | CERAMIC CHIP 1000PF 5% | 50V |
| C5516 | 1-162-927-11 | CERAMIC CHIP 100PF 5% | 50V |
| | | | (3.5 LCD TYPE S) |
| | | | |
| C5516 | 1-162-925-11 | CERAMIC CHIP 68PF 5% | 50V |
| | | | (4 LCD TYPE S) |

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PD-118 (3 LCD TYPE S)/PD-118 (3.5 LCD TYPE S)/PD-118 (4 LCD TYPE S)

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|--|--------|
| C5516 | 1-162-926-11 | CERAMIC CHIP 82PF 5% 50V (3 LCD TYPE S) | |
| C5517 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C5518 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C5519 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C5520 | 1-113-994-11 | TANTAL. CHIP 6.8uF 20% 16V | |
| C5521 | 1-107-682-11 | CERAMIC CHIP 1uF 10% 16V | |
| C5522 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C5523 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C5524 | 1-107-682-11 | CERAMIC CHIP 1uF 10% 16V | |
| C5527 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C5528 | 1-135-177-21 | TANTALUM CHIP 1uF 20% 25V | |
| C5529 | 1-107-725-11 | CERAMIC CHIP 0.1uF 10% 16V | |
| C5530 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C5531 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C5602 | 1-113-682-11 | TANTAL. CHIP 33uF 20% 10V | |
| C5603 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| C5604 | 1-164-657-11 | CERAMIC CHIP 0.015uF 10% 50V | |
| C5605 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C5606 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| △ C5607 | 1-131-959-91 | CERAMIC CHIP 12PF 10% 3KV | |
| C5704 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |

< CONNECTOR >

| | | | |
|----------|--------------|-------------------------------|--|
| CN5501 | 1-573-364-11 | CONNECTOR, FFC/FPC 24P | |
| * CN5502 | 1-573-984-11 | CONNECTOR, BOARD TO BOARD 10P | |
| * CN5604 | 1-569-352-11 | HOUSING, CONNECTOR 10P | |
| CN5701 | 1-779-893-11 | PIN, CONNECTOR (PC BOARD) 8P | |
| CN5702 | 1-779-064-11 | PIN, CONNECTOR (PC BOARD) 12P | |
| * CN5703 | 1-778-154-21 | CONNECTOR, FFC/FPC (ZIF) 6P | |
| CN5704 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | |
| CN5705 | 1-764-532-21 | CONNECTOR, FFC/FPC (ZIF) 26P | |
| CN5707 | 1-691-374-11 | CONNECTOR, FFC/FPC 10P | |

< DIODE >

| | | | |
|---------|--------------|-----------------------|--|
| D5502 | 8-713-102-80 | DIODE 1T369-01-T8A | |
| D5503 | 8-719-073-01 | DIODE MA111- (K8) .SO | |
| △ D5601 | 8-719-073-01 | DIODE MA111- (K8) .SO | |
| D5702 | 8-719-073-01 | DIODE MA111- (K8) .SO | |

< IC >

| | | | |
|--------|--------------|-----------------------|--|
| IC5501 | 8-759-660-92 | IC RB5P003AM1 | |
| IC5502 | 8-759-660-91 | IC LZ9FF424 | |
| IC5503 | 8-759-478-92 | IC TC7SET04FU (TE85R) | |
| IC5601 | 8-759-564-49 | IC TC7W53FU (TE12R) | |
| IC5602 | 8-759-075-70 | IC TA75S393F-TE85R | |

| | | | |
|--------|--------------|---------------|--|
| IC5701 | 8-759-573-02 | IC BU9735K-E2 | |
|--------|--------------|---------------|--|

< COIL >

| | | | |
|-------|--------------|----------------|--|
| L5501 | 1-469-525-91 | INDUCTOR 10uH | |
| L5502 | 1-469-525-91 | INDUCTOR 10uH | |
| L5503 | 1-469-525-91 | INDUCTOR 10uH | |
| L5504 | 1-469-525-91 | INDUCTOR 10uH | |
| L5505 | 1-412-949-21 | INDUCTOR 6.8uH | |
| L5601 | 1-419-387-21 | INDUCTOR 100uH | |

| Ref. No. | Part No. | Description | Remark |
|----------------|--------------|--|--------|
| < TRANSISTOR > | | | |
| Q5501 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8) .SO | |
| Q5502 | 8-729-041-23 | TRANSISTOR MGSF1P02LT1 | |
| Q5503 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8) .SO | |
| Q5504 | 8-729-037-53 | TRANSISTOR 2SB1462J-QR (K8) .SO | |
| Q5505 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8) .SO | |
| Q5506 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8) .SO | |
| Q5601 | 8-729-037-74 | TRANSISTOR UN9213J- (K8) .SO | |
| Q5602 | 8-729-039-43 | TRANSISTOR FP216-TL | |
| Q5603 | 8-729-037-74 | TRANSISTOR UN9213J- (K8) .SO | |
| Q5604 | 8-729-042-58 | TRANSISTOR UN9111J- (K8) .SO | |
| < RESISTOR > | | | |
| R5501 | 1-216-853-11 | METAL CHIP 470K 5% 1/16W | |
| R5503 | 1-218-895-11 | METAL CHIP 100K 0.5% 1/16W | |
| R5504 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | |
| R5505 | 1-216-835-11 | METAL CHIP 15K 5% 1/16W | |
| R5506 | 1-216-826-11 | METAL CHIP 2.7K 5% 1/16W | |
| R5507 | 1-216-841-11 | METAL CHIP 47K 5% 1/16W | |
| R5508 | 1-216-843-11 | METAL CHIP 68K 5% 1/16W | |
| R5509 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W | |
| R5510 | 1-216-843-11 | METAL CHIP 68K 5% 1/16W | |
| R5511 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R5512 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | |
| R5513 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R5515 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5516 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R5519 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5520 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5521 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5523 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | |
| R5524 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | |
| R5525 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | |
| R5551 | 1-216-841-11 | METAL CHIP 47K 5% 1/16W | |
| R5553 | 1-216-832-11 | METAL CHIP 8.2K 5% 1/16W (4 LCD TYPE S) | |
| R5553 | 1-216-830-11 | METAL CHIP 5.6K 5% 1/16W (3.5 LCD TYPE S) | |
| R5553 | 1-216-829-11 | METAL CHIP 4.7K 5% 1/16W (3 LCD TYPE S) | |
| R5557 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5560 | 1-216-853-11 | METAL CHIP 470K 5% 1/16W | |
| R5562 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R5563 | 1-216-841-11 | METAL CHIP 47K 5% 1/16W | |
| R5564 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R5565 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R5569 | 1-216-848-11 | METAL CHIP 180K 5% 1/16W | |
| R5608 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5609 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R5610 | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W | |
| R5611 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | |
| R5612 | 1-216-834-11 | METAL CHIP 12K 5% 1/16W | |
| R5613 | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W | |
| R5614 | 1-216-836-11 | METAL CHIP 18K 5% 1/16W | |
| R5616 | 1-216-810-11 | METAL CHIP 120 5% 1/16W | |
| R5617 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W | |
| R5618 | 1-216-817-11 | METAL CHIP 470 5% 1/16W | |
| R5702 | 1-216-822-11 | METAL CHIP 1.2K 5% 1/16W | |

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Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-118 (3 LCD TYPE S)/PD-118 (3.5 LCD TYPE S)/PD-118 (4 LCD TYPE S)

PD-118 (3.5 LCD TYPE C)/PD-118 (4 LCD TYPE C)

| Ref. No. | Part No. | Description | Remark |
|--|--------------|-------------------------------|--------|
| R5704 | 1-216-823-11 | METAL CHIP 1.5K 5% | 1/16W |
| R5706 | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W |
| R5707 | 1-216-828-11 | METAL CHIP 3.9K 5% | 1/16W |
| R5708 | 1-216-832-11 | METAL CHIP 8.2K 5% | 1/16W |
| R5712 | 1-216-855-11 | METAL CHIP 680K 5% | 1/16W |
| R5714 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| < TRANSFORMER > | | | |
| △ T5601 | 1-435-229-21 | TRANSFORMER, INVERTER | |
| A-7074-377-A PD-118 BOARD, COMPLETE (3.5 LCD TYPE C) | | | |
| A-7074-383-A PD-118 BOARD, COMPLETE (4 LCD TYPE C) | | | |
| ***** | | | |
| (Ref. No.: 30, 000 Series) | | | |
| < CAPACITOR > | | | |
| C5501 | 1-119-750-11 | TANTAL. CHIP 22uF 20% | 6.3V |
| C5503 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5504 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5505 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C5506 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C5507 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C5508 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5509 | 1-107-687-11 | TANTAL. CHIP 3.3uF 20% | 20V |
| C5510 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5511 | 1-164-739-11 | CERAMIC CHIP 560PF 5% | 50V |
| C5512 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5513 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5514 | 1-119-750-11 | TANTAL. CHIP 22uF 20% | 6.3V |
| C5515 | 1-164-357-11 | CERAMIC CHIP 1000PF 5% | 50V |
| C5516 | 1-162-925-11 | CERAMIC CHIP 68PF 5% | 50V |
| (3.5 LCD TYPE C) | | | |
| C5516 | 1-162-927-11 | CERAMIC CHIP 100PF 5% | 50V |
| (4 LCD TYPE C) | | | |
| C5517 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% | 25V |
| C5518 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% | 25V |
| C5519 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% | 25V |
| C5520 | 1-113-994-11 | TANTAL. CHIP 6.8uF 20% | 16V |
| C5521 | 1-107-682-11 | CERAMIC CHIP 1uF 10% | 16V |
| C5522 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5523 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5524 | 1-107-682-11 | CERAMIC CHIP 1uF 10% | 16V |
| C5527 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% | 25V |
| C5529 | 1-107-725-11 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5602 | 1-113-682-11 | TANTAL. CHIP 33uF 20% | 10V |
| C5603 | 1-109-982-11 | CERAMIC CHIP 1uF 10% | 10V |
| C5604 | 1-164-657-11 | CERAMIC CHIP 0.015uF 10% | 50V |
| C5605 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| C5606 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| △ C5607 | 1-131-959-91 | CERAMIC CHIP 12PF 10% | 3KV |
| C5704 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% | 16V |
| < CONNECTOR > | | | |
| CN5501 | 1-573-364-11 | CONNECTOR, FFC/FPC 24P | |
| * CN5502 | 1-573-984-11 | CONNECTOR, BOARD TO BOARD 10P | |
| * CN5604 | 1-569-352-11 | HOUSING, CONNECTOR 10P | |
| CN5701 | 1-779-893-11 | PIN, CONNECTOR (PC BOARD) 8P | |
| CN5702 | 1-779-064-11 | PIN, CONNECTOR (PC BOARD) 12P | |

| Ref. No. | Part No. | Description | Remark |
|------------------|--------------|---------------------------------|--------|
| * CN5703 | 1-778-154-21 | CONNECTOR, FFC/FPC (ZIF) 6P | |
| CN5704 | 1-778-508-21 | PIN, CONNECTOR (PC BOARD) 6P | |
| CN5705 | 1-764-532-21 | CONNECTOR, FFC/FPC (ZIF) 26P | |
| CN5707 | 1-691-374-11 | CONNECTOR, FFC/FPC 10P | |
| < DIODE > | | | |
| D5502 | 8-713-102-80 | DIODE 1T369-01-T8A | |
| △ D5601 | 8-719-073-01 | DIODE MA111- (K8) .SO | |
| D5702 | 8-719-073-01 | DIODE MA111- (K8) .SO | |
| < IC > | | | |
| IC5501 | 8-759-660-92 | IC RB5P003AM1 | |
| IC5502 | 8-759-591-93 | IC CM7019L3-T4 | |
| IC5601 | 8-759-564-49 | IC TC7W53FU (TE12R) | |
| IC5602 | 8-759-075-70 | IC TA75S393F-TE85R | |
| IC5701 | 8-759-573-02 | IC BU9735K-E2 | |
| < COIL > | | | |
| L5501 | 1-469-525-91 | INDUCTOR 10uH | |
| L5502 | 1-469-525-91 | INDUCTOR 10uH | |
| L5503 | 1-469-525-91 | INDUCTOR 10uH | |
| L5504 | 1-469-525-91 | INDUCTOR 10uH | |
| L5505 | 1-412-950-11 | INDUCTOR 8.2uH (3.5 LCD TYPE C) | |
| L5505 | 1-412-949-21 | INDUCTOR 6.8uH (4 LCD TYPE C) | |
| L5601 | 1-419-387-21 | INDUCTOR 100uH | |
| < TRANSISTOR > | | | |
| Q5501 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8) .SO | |
| Q5601 | 8-729-037-74 | TRANSISTOR UN9213J- (K8) .SO | |
| Q5602 | 8-729-039-43 | TRANSISTOR FP216-TL | |
| Q5603 | 8-729-037-74 | TRANSISTOR UN9213J- (K8) .SO | |
| Q5604 | 8-729-042-58 | TRANSISTOR UN9111J- (K8) .SO | |
| < RESISTOR > | | | |
| R5501 | 1-216-853-11 | METAL CHIP 470K 5% | 1/16W |
| R5503 | 1-218-895-11 | METAL CHIP 100K 0.5% | 1/16W |
| R5504 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W |
| R5505 | 1-216-835-11 | METAL CHIP 15K 5% | 1/16W |
| R5506 | 1-216-826-11 | METAL CHIP 2.7K 5% | 1/16W |
| R5507 | 1-216-841-11 | METAL CHIP 47K 5% | 1/16W |
| R5508 | 1-216-843-11 | METAL CHIP 68K 5% | 1/16W |
| R5509 | 1-216-837-11 | METAL CHIP 22K 5% | 1/16W |
| R5510 | 1-216-843-11 | METAL CHIP 68K 5% | 1/16W |
| R5511 | 1-216-857-11 | METAL CHIP 1M 5% | 1/16W |
| R5512 | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W |
| R5514 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| R5516 | 1-216-833-91 | RES-CHIP 10K 5% | 1/16W |
| R5517 | 1-216-846-11 | METAL CHIP 120K 5% | 1/16W |
| R5518 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| R5519 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| R5520 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| R5522 | 1-216-864-11 | METAL CHIP 0 5% | 1/16W |
| R5523 | 1-216-809-11 | METAL CHIP 100 5% | 1/16W |
| R5524 | 1-216-809-11 | METAL CHIP 100 5% | 1/16W |
| R5525 | 1-216-809-11 | METAL CHIP 100 5% | 1/16W |
| R5551 | 1-216-841-11 | METAL CHIP 47K 5% | 1/16W |
| R5553 | 1-216-831-11 | METAL CHIP 6.8K 5% | 1/16W |
| (3.5 LCD TYPE C) | | | |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-118 (3.5 LCD TYPE C)/PD-118 (4 LCD TYPE C)

SE-104/SE-112/SE-114

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| R5553 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W (4 LCD TYPE C) | |
| R5557 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5559 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5560 | 1-216-853-11 | METAL CHIP 470K 5% 1/16W | |
| R5566 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5567 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5568 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5608 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R5609 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R5610 | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W | |
| R5611 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | |
| R5612 | 1-216-834-11 | METAL CHIP 12K 5% 1/16W | |
| R5613 | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W | |
| R5614 | 1-216-836-11 | METAL CHIP 18K 5% 1/16W | |
| R5616 | 1-216-810-11 | METAL CHIP 120 5% 1/16W | |
| R5617 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W | |
| R5618 | 1-216-817-11 | METAL CHIP 470 5% 1/16W | |
| R5702 | 1-216-822-11 | METAL CHIP 1.2K 5% 1/16W | |
| R5704 | 1-216-823-11 | METAL CHIP 1.5K 5% 1/16W | |
| R5706 | 1-216-825-11 | METAL CHIP 2.2K 5% 1/16W | |
| R5707 | 1-216-828-11 | METAL CHIP 3.9K 5% 1/16W | |
| R5708 | 1-216-832-11 | METAL CHIP 8.2K 5% 1/16W | |
| R5712 | 1-216-855-11 | METAL CHIP 680K 5% 1/16W | |
| R5714 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |

< TRANSFORMER >

△ T5601 1-435-229-21 TRANSFORMER, INVERTER

A-7074-329-A SE-104 BOARD, COMPLETE
(TRV320/TRV320P)
A-7074-353-A SE-104 BOARD, COMPLETE (TRV320E)
A-7074-345-A SE-112 BOARD, COMPLETE
(TRV520/TRV520P/TRV525)
A-7074-375-A SE-112 BOARD, COMPLETE
(TRV420E/TRV520E/TRV620E)
A-7074-369-A SE-114 BOARD, COMPLETE (TRV720E)
A-7074-379-A SE-114 BOARD, COMPLETE (TRV720)

(Ref. No.: 20, 000 Series)

< CAPACITOR >

| | | |
|------|--------------|------------------------------|
| C201 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V |
| C202 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V |
| C203 | 1-104-847-11 | TANTAL. CHIP 22uF 20% 4V |
| C204 | 1-104-847-11 | TANTAL. CHIP 22uF 20% 4V |
| C207 | 1-164-343-11 | CERAMIC CHIP 0.056uF 10% 25V |
| C208 | 1-164-343-11 | CERAMIC CHIP 0.056uF 10% 25V |
| C209 | 1-164-343-11 | CERAMIC CHIP 0.056uF 10% 25V |
| C210 | 1-110-666-11 | ELECT CHIP 22uF 20% 6.3V |
| C211 | 1-164-343-11 | CERAMIC CHIP 0.056uF 10% 25V |
| C212 | 1-110-666-11 | ELECT CHIP 22uF 20% 6.3V |
| C214 | 1-110-501-11 | CERAMIC CHIP 0.33uF 10% 16V |
| C220 | 1-135-259-11 | TANTAL. CHIP 10uF 20% 6.3V |
| C221 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V |
| C223 | 1-803-974-21 | VARISTOR, CHIP (Note) |
| C225 | 1-803-974-21 | VARISTOR, CHIP (Note) |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| C226 | 1-803-974-21 | VARISTOR, CHIP (Note) | |
| | | < CONNECTOR > | |
| CN201 | 1-779-369-11 | CONNECTOR, SQUARE TYPE (INDI)4P (DV IN/OUT)(TRV320/TRV320E: E, HK, AUS, CN/TRV320P/TRV420E: CN/TRV520/ TRV520P/TRV520E: E, HK, AUS, CN, JE/TRV525/TRV620E/ TRV720/TRV720E) | |
| CN201 | 1-794-080-11 | CONNECTOR, SQUARE TYPE (INDI)4P (DV OUT) (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |
| CN202 | 1-573-368-11 | CONNECTOR, FFC/FPC 28P | |
| | | < DIODE > | |
| D202 | 8-719-072-91 | DIODE MAZJ200D0LS0 | |
| D211 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | |
| D212 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | |
| | | < IC > | |
| IC201 | 8-759-489-19 | IC NJM3230V (TE2) | |
| | | < JACK > | |
| J201 | 1-694-651-11 | TERMINAL BOARD (S VIDEO ID-2) (AUDIO/VIDEO ID-2) | |
| J202 | 1-793-995-11 | JACK, SUPER SMALL TYPE (LANC/DIGITAL I/O) | |

< COIL >

L201 1-469-525-91 INDUCTOR 10uH

< RESISTOR >

| | | |
|------|--------------|-------------------------|
| R201 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W |
| R202 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W |
| R203 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W |
| R204 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W |
| R205 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R206 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W |
| R207 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W |
| R208 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W |
| R209 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W |
| R211 | 1-216-835-11 | METAL CHIP 15K 5% 1/16W |
| R212 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R213 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R214 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R215 | 1-216-295-91 | SHORT 0 |
| R217 | 1-216-295-91 | SHORT 0 |
| R219 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R220 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R224 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R225 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R226 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |
| R227 | 1-216-864-11 | METAL CHIP 0 5% 1/16W |

Note: Varistors are mounted to the location where C223, 225, 226 are printed

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark | | | | Ref. No. | Part No. | Description | Remark | | | |
|--------------|---|---|--------|--|--|--|----------|--------------|---------------|---------------|-------|------|------|
| < SENSOR > | | | | | | | | | | | | | |
| SE201 | 1-803-042-31 | SENSOR, ANGULAR VELOCITY (PITCH SENSOR) (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | | | | | C1327 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V | |
| | | | | | | | C1328 | 1-162-974-11 | CERAMIC CHIP | 0.01uF | | 50V | |
| | | | | | | | C1329 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V | |
| | | | | | | | C1330 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V | |
| | | | | | | | C1331 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V | |
| SE201 | 1-418-252-11 | SENSOR, ANGULAR VELOCITY (PITCH SENSOR) (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | | C1332 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V | |
| | | | | | | | C1333 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | |
| | | | | | | | C1334 | 1-135-157-21 | TANTALUM CHIP | 10uF | 20% | 6.3V | |
| SE202 | 1-803-042-41 | SENSOR, ANGULAR VELOCITY (YAW SENSOR) (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | | | | | C1335 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | |
| | | | | | | | C1336 | 1-119-750-11 | TANTAL. CHIP | 22uF | 20% | 6.3V | |
| SE202 | 1-418-252-21 | SENSOR, ANGULAR VELOCITY (YAW SENSOR) (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | | | C1337 | 1-164-506-11 | CERAMIC CHIP | 4.7uF | | 16V | |
| | | | | | | | C1338 | 1-164-506-11 | CERAMIC CHIP | 4.7uF | | 16V | |
| | | | | | | | C1339 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | |
| | | | | | | | C1340 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | |
| | | | | | | | C1341 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | |
| < VARISTOR > | | | | | | | | | | | | | |
| VDR001 | 1-801-923-11 | VARISTOR, CHIP | | | | | C1342 | 1-165-319-11 | CERAMIC CHIP | 0.1uF | | 50V | |
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| A-7094-874-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV320/TRV320P/TRV520/TRV520P) | | | | | | | C1343 | 1-135-157-21 | TANTALUM CHIP | 10uF | 20% | 6.3V |
| A-7094-873-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/ TRV520E: AEP) | | | | | | | C1344 | 1-115-566-11 | CERAMIC CHIP | 4.7uF | 10% | 10V |
| A-7094-878-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV320E: E, HK, AUS, CN/TRV420E: CN/ TRV520E: E, HK, AUS, CN, JE) | | | | | | | C1345 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| A-7094-875-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV525/TRV720) | | | | | | | C1346 | 1-135-157-21 | TANTALUM CHIP | 10uF | 20% | 6.3V |
| A-7094-877-A | VC-235 BOARD, COMPLETE (SERVICE) (TRV620E/TRV720E) | | | | | | | C1347 | 1-135-216-11 | TANTALUM CHIP | 10uF | 20% | 10V |
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Note: C1504 is mounted on the board with suffix number 13
(23, 33)

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|---------------|----------|-----|------|----------|--------------|--------------|----------|--------|------|
| C1520 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | C3111 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C1521 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3112 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| C1522 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3113 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1523 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | C3114 | 1-164-866-11 | CERAMIC CHIP | 47PF | 5% | 16V |
| C1524 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V | C3115 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C1525 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3116 | 1-164-677-11 | CERAMIC CHIP | 0.033uF | 10% | 16V |
| C1552 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3117 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| C1554 | 1-164-941-11 | CERAMIC CHIP | 0.0047uF | 10% | 16V | C3118 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1556 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3119 | 1-164-866-11 | CERAMIC CHIP | 47PF | 5% | 16V |
| C1558 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C3120 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1559 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | C3121 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1560 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V | C3122 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C1561 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3123 | 1-164-942-11 | CERAMIC CHIP | 0.0068uF | 10% | 16V |
| C1562 | 1-164-489-11 | CERAMIC CHIP | 0.22uF | 10% | 16V | C3124 | 1-164-942-11 | CERAMIC CHIP | 0.0068uF | 10% | 16V |
| C1563 | 1-125-839-91 | TANTAL. CHIP | 47uF | 20% | 6.3V | C3126 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1564 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | C3127 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1565 | 1-107-823-11 | CERAMIC CHIP | 0.47uF | 10% | 16V | C3128 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1566 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3131 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1568 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 16V | C3133 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C1569 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3134 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C1570 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3135 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 16V |
| C1571 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | C3136 | 1-164-872-11 | CERAMIC CHIP | 82PF | 5% | 16V |
| C1572 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C3137 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2201 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3138 | 1-164-874-11 | CERAMIC CHIP | 100PF | 5% | 16V |
| C2202 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | C3139 | 1-164-878-11 | CERAMIC CHIP | 150PF | 5% | 16V |
| C2203 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3141 | 1-164-882-11 | CERAMIC CHIP | 220PF | 5% | 16V |
| C2204 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C3142 | 1-164-882-11 | CERAMIC CHIP | 220PF | 5% | 16V |
| C2208 | 1-164-392-11 | CERAMIC CHIP | 390PF | 5% | 50V | C3143 | 1-164-882-11 | CERAMIC CHIP | 220PF | 5% | 16V |
| C2210 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3144 | 1-164-882-11 | CERAMIC CHIP | 220PF | 5% | 16V |
| C2211 | 1-119-660-11 | TANTAL. CHIP | 4.7uF | 20% | 6.3V | C3201 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2212 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3202 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2213 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3203 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C2215 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3204 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2223 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | C3205 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2225 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3206 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2226 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3207 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2227 | 1-107-823-11 | CERAMIC CHIP | 0.47uF | 10% | 16V | C3208 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2228 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3210 | 1-164-941-11 | CERAMIC CHIP | 0.0047uF | 10% | 16V |
| C2229 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3211 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2230 | 1-164-938-11 | CERAMIC CHIP | 0.0015uF | 10% | 16V | C3212 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2232 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3213 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C2233 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3214 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2234 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3215 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2238 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3216 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C2240 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3217 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2242 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V | C3218 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2243 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3301 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C2244 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3302 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C2247 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3303 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C2250 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3305 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C2291 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3306 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C2292 | 1-104-852-11 | TANTAL. CHIP | 22uF | 20% | 6.3V | C3307 | 1-164-850-11 | CERAMIC CHIP | 10PF | 0.50PF | 16V |
| C2293 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C3308 | 1-164-850-11 | CERAMIC CHIP | 10PF | 0.50PF | 16V |
| C3102 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3309 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3104 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3310 | 1-127-760-91 | CERAMIC CHIP | 4.7uF | 10% | 6.3V |
| C3105 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3311 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3107 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3312 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3108 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3313 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3109 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3314 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3110 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3315 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|---------------|---------|-----|------|----------|--------------|--------------|---------|-----|------|
| C3316 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | C3711 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V |
| C3317 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3712 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V |
| C3318 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3713 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3319 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | C3714 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C3320 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3715 | 1-110-501-11 | CERAMIC CHIP | 0.33uF | 10% | 16V |
| C3321 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3716 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3322 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V | C3717 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3323 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3718 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3324 | 1-119-923-81 | CERAMIC CHIP | 0.047uF | 10% | 10V | C3719 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3325 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | C3723 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3326 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V | C3724 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3327 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V | C3728 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V |
| C3328 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3729 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V |
| C3329 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3730 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3331 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C3731 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3332 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3732 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C3333 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | C3733 | 1-126-246-11 | ELECT CHIP | 220uF | 20% | 4V |
| C3334 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C3734 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V |
| C3335 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C3735 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C3337 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4401 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3338 | 1-164-882-11 | CERAMIC CHIP | 220PF | 5% | 16V | C4402 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3342 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4403 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3343 | 1-127-760-91 | CERAMIC CHIP | 4.7uF | 10% | 6.3V | C4404 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3345 | 1-127-760-91 | CERAMIC CHIP | 4.7uF | 10% | 6.3V | C4405 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V |
| C3346 | 1-127-760-91 | CERAMIC CHIP | 4.7uF | 10% | 6.3V | C4406 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V |
| C3348 | 1-127-760-91 | CERAMIC CHIP | 4.7uF | 10% | 6.3V | C4407 | 1-119-923-81 | CERAMIC CHIP | 0.047uF | 10% | 10V |
| C3601 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C4408 | 1-104-912-11 | TANTAL. CHIP | 3.3uF | 10% | 6.3V |
| C3603 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4409 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3604 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | C4410 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3608 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C4411 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3610 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | C4412 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3611 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4413 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3612 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4414 | 1-164-933-11 | CERAMIC CHIP | 220PF | 10% | 16V |
| C3613 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4415 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| C3614 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4416 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3615 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4417 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3616 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4418 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| C3617 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4419 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3618 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4420 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3619 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4421 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3620 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4424 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3621 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4425 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V |
| C3622 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4426 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3626 | 1-107-826-91 | CERAMIC CHIP | 0.1uF | 10% | 16V | C4427 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3628 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4428 | 1-119-923-81 | CERAMIC CHIP | 0.047uF | 10% | 10V |
| C3629 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C4429 | 1-119-923-81 | CERAMIC CHIP | 0.047uF | 10% | 10V |
| C3630 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C4430 | 1-164-505-11 | CERAMIC CHIP | 2.2uF | 10% | 16V |
| C3631 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C4431 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V |
| C3632 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4432 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3633 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | C4433 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3634 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | C4434 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3636 | 1-164-858-11 | CERAMIC CHIP | 22PF | 5% | 16V | C4435 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| C3701 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4436 | 1-164-935-11 | CERAMIC CHIP | 470PF | 10% | 16V |
| C3704 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | C4501 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V |
| C3705 | 1-110-501-11 | CERAMIC CHIP | 0.33uF | 10% | 16V | C4504 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C3706 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | C4505 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3707 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | C4506 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3708 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V | C4507 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3709 | 1-164-677-11 | CERAMIC CHIP | 0.033uF | 10% | 16V | C4508 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |
| C3710 | 1-125-838-91 | CERAMIC CHIP | 2.2uF | 10% | 6.3V | C4509 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V |

| Ref. No. | Part No. | Description | Remark | | | | Ref. No. | Part No. | Description | Remark | | | |
|----------|--------------|---------------|----------|--------|------|--|---------------|--------------|--------------------------------|----------|-----|------|--|
| C4510 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5731 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4801 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V | | C5732 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4802 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5733 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4803 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5734 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4804 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5735 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | |
| C4805 | 1-104-851-11 | TANTAL. CHIP | 10uF | 20% | 10V | | C5736 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4806 | 1-119-749-11 | TANTAL. CHIP | 33uF | 20% | 4V | | C5737 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4807 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5738 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4808 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5739 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | |
| C4809 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5740 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4810 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5741 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4811 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5742 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | |
| C4812 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5743 | 1-164-937-11 | CERAMIC CHIP | 0.001uF | 10% | 16V | |
| C4813 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5744 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C4814 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5745 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C4816 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5746 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V | |
| C4817 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5747 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V | |
| C4819 | 1-107-819-11 | CERAMIC CHIP | 0.022uF | 10% | 16V | | C5748 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C4820 | 1-164-942-11 | CERAMIC CHIP | 0.0068uF | 10% | 16V | | C5749 | 1-164-870-11 | CERAMIC CHIP | 68PF | 5% | 16V | |
| C4821 | 1-164-858-11 | CERAMIC CHIP | 22PF | 5% | 16V | | C5750 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | |
| C4822 | 1-164-854-11 | CERAMIC CHIP | 15PF | 5% | 16V | | C5751 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | |
| C4823 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5752 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C4824 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5753 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | |
| C4825 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | C5754 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4826 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5755 | 1-164-942-11 | CERAMIC CHIP | 0.0068uF | 10% | 16V | |
| C4902 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | | C5756 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4903 | 1-164-850-11 | CERAMIC CHIP | 10PF | 0.50PF | 16V | | C5757 | 1-164-942-11 | CERAMIC CHIP | 0.0068uF | 10% | 16V | |
| C4904 | 1-164-850-11 | CERAMIC CHIP | 10PF | 0.50PF | 16V | | C5758 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4905 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | C5759 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | |
| C4906 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | < CONNECTOR > | | | | | | |
| C4907 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | CN1101 | 1-766-340-21 | CONNECTOR, FFC/FPC 10P | | | | |
| C4908 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | CN1103 | 1-766-358-21 | CONNECTOR, FFC/FPC 28P | | | | |
| C4909 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | CN1104 | 1-774-598-41 | CONNECTOR, BOARD TO BOARD 100P | | | | |
| C4910 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | CN1105 | 1-785-760-11 | CONNECTOR, FFC/FPC (ZIF) 45P | | | | |
| C4911 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | CN1107 | 1-766-342-21 | CONNECTOR, FFC/FPC 12P | | | | |
| C5701 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | | CN1108 | 1-766-350-21 | CONNECTOR, FFC/FPC 20P | | | | |
| C5702 | 1-135-201-11 | TANTALUM CHIP | 10uF | 20% | 4V | | CN1109 | 1-794-059-21 | PIN, CONNECTOR (PC BOARD) 8P | | | | |
| C5703 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | CN1111 | 1-770-107-21 | CONNECTOR, FFC/FPC (ZIF) 32P | | | | |
| C5704 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | | * CN1113 | 1-766-971-21 | CONNECTOR, BOARD TO BOARD 42P | | | | |
| C5705 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V | | CN1501 | 1-779-332-11 | CONNECTOR, FFC/FPC 16P | | | | |
| C5706 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | | CN1551 | 1-750-360-21 | CONNECTOR, FFC/FPC (ZIF) 24P | | | | |
| C5709 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | CN3101 | 1-766-346-21 | CONNECTOR, FFC/FPC 16P | | | | |
| C5710 | 1-164-943-11 | CERAMIC CHIP | 0.01uF | 10% | 16V | | CN4401 | 1-766-644-21 | CONNECTOR, FFC/FPC 8P | | | | |
| C5711 | 1-110-569-11 | TANTAL. CHIP | 47uF | 20% | 6.3V | | CN4402 | 1-766-340-21 | CONNECTOR, FFC/FPC 10P | | | | |
| C5712 | 1-110-569-11 | TANTAL. CHIP | 47uF | 20% | 6.3V | | CN4403 | 1-766-342-21 | CONNECTOR, FFC/FPC 12P | | | | |
| C5713 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V | | CN4404 | 1-766-345-21 | CONNECTOR, FFC/FPC 15P | | | | |
| C5714 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | | < DIODE > | | | | | | |
| C5715 | 1-135-180-21 | TANTALUM CHIP | 3.3uF | 20% | 6.3V | | D1101 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | | | |
| C5716 | 1-135-259-11 | TANTAL. CHIP | 10uF | 20% | 6.3V | | D1102 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | | | | |
| C5717 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | D1103 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | | | | |
| C5718 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | D1104 | 8-719-062-16 | DIODE 01ZA8.2 (TPL3) | | | | |
| C5719 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | D1301 | 8-719-027-76 | DIODE 1SS357-TPH3 | | | | |
| C5720 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | D1302 | 8-719-027-77 | DIODE MA796-TX | | | | |
| C5721 | 1-164-939-11 | CERAMIC CHIP | 0.0022uF | 10% | 16V | | D1305 | 8-719-027-76 | DIODE 1SS357-TPH3 | | | | |
| C5722 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | D1306 | 8-719-027-76 | DIODE 1SS357-TPH3 | | | | |
| C5723 | 1-104-847-11 | TANTAL. CHIP | 22uF | 20% | 4V | | D1501 | 8-713-103-84 | DIODE 1T379-01-T8A | | | | |
| C5724 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | D1551 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | | | |
| C5725 | 1-125-837-91 | CERAMIC CHIP | 1uF | 10% | 6.3V | | | | | | | | |
| C5728 | 1-125-777-11 | CERAMIC CHIP | 0.1uF | 10% | 10V | | | | | | | | |
| C5730 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V | | | | | | | | |

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|------------------|--------------|---|--------|----------|--------------|---|--------|
| D2201 | 8-719-055-86 | DIODE KV1470TL1-3 | | IC3701 | 8-759-599-37 | IC AN2225FHQ-EB | |
| D2202 | 8-719-055-86 | DIODE KV1470TL1-3 | | IC4401 | 8-759-640-85 | IC CXA8096R-TBM | |
| D3301 | 8-719-992-02 | DIODE RB705D-T146 | | IC4501 | 8-759-680-15 | IC MB91192PFF-G-114-BND-ER | |
| D3302 | 8-719-055-86 | DIODE KV1470TL1-3 | | IC4502 | 8-759-593-47 | IC AK6417AM-E2 | |
| D3303 | 8-719-992-02 | DIODE RB705D-T146 | | | | (TRV320/TRV320P/TRV520/TRV520P/ TRV525/TRV720) | |
| D3304 | 8-719-055-86 | DIODE KV1470TL1-3 | | IC4502 | 8-759-640-87 | IC BR9016RFV-E2 | |
| D4401 | 8-719-075-12 | DIODE MA3XD21001S0 | | | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | |
| D4801 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | IC4801 | 8-759-424-79 | IC S-8423YFS-T2 | |
| D4802 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | IC4802 | 8-759-642-45 | IC TL1596CPWR | |
| D4803 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | IC4803 | 8-759-680-69 | IC S579631PZ-TEB | |
| D4804 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | IC4901 | 8-759-445-94 | IC AK6480AM-E2 | |
| D4808 | 8-719-027-76 | DIODE 1SS357-TPH3 | | IC4902 | 8-759-680-04 | IC MB91192PFF-G-112-BND-ER | |
| D4809 | 8-719-027-76 | DIODE 1SS357-TPH3 | | | | | |
| D4810 | 8-719-069-59 | DIODE UDZS-TE17-8.2B | | IC5701 | 8-752-093-72 | IC CXA3284R-T6 | |
| D4811 | 8-719-073-01 | DIODE MA111- (K8) .S0 | | IC5702 | 8-759-647-71 | IC AK4550VT-E2 | |
| < FERRITE BEAD > | | | | < COIL > | | | |
| FB1501 | 1-414-760-21 | FERRITE | 0uH | L1301 | 1-416-670-11 | INDUCTOR | 33uH |
| FB1502 | 1-500-284-21 | INDUCTOR CHIP | 0uH | L1302 | 1-416-669-11 | INDUCTOR | 22uH |
| FB1503 | 1-500-284-21 | INDUCTOR CHIP | 0uH | L1303 | 1-416-669-11 | INDUCTOR | 22uH |
| FB1504 | 1-414-760-21 | FERRITE | 0uH | L1304 | 1-416-669-11 | INDUCTOR | 22uH |
| FB1505 | 1-500-284-21 | INDUCTOR CHIP | 0uH | L1305 | 1-416-669-11 | INDUCTOR | 22uH |
| FB2202 | 1-414-760-21 | FERRITE | 0uH | L1306 | 1-412-056-11 | INDUCTOR | 4.7uH |
| FB2203 | 1-414-760-21 | FERRITE | 0uH | L1307 | 1-412-056-11 | INDUCTOR | 4.7uH |
| FB2204 | 1-414-760-21 | FERRITE | 0uH | L1308 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB2205 | 1-414-760-21 | FERRITE | 0uH | L1309 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB2291 | 1-414-760-21 | FERRITE | 0uH | L1310 | 1-412-056-11 | INDUCTOR | 4.7uH |
| FB3303 | 1-414-760-21 | FERRITE | 0uH | L1311 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB3304 | 1-414-760-21 | FERRITE | 0uH | L1312 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB3307 | 1-414-760-21 | FERRITE | 0uH | L1313 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB3601 | 1-414-760-21 | FERRITE | 0uH | L1314 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB3701 | 1-414-760-21 | FERRITE | 0uH | L1315 | 1-469-524-91 | INDUCTOR | 4.7uH |
| FB4501 | 1-414-760-21 | FERRITE | 0uH | L1316 | 1-414-400-11 | INDUCTOR | 22uH |
| FB4801 | 1-414-760-21 | FERRITE | 0uH | L1317 | 1-416-669-11 | INDUCTOR | 22uH |
| FB4901 | 1-414-760-21 | FERRITE | 0uH | L1318 | 1-469-524-91 | INDUCTOR | 4.7uH |
| < IC > | | | | L1320 | 1-469-526-91 | INDUCTOR | 22uH |
| IC1301 | 8-752-090-20 | IC CXA3057R-T6 | | L1321 | 1-469-524-91 | INDUCTOR | 4.7uH |
| IC1302 | 8-759-652-10 | IC TK11119SCL | | L1501 | 1-469-525-91 | INDUCTOR | 10uH |
| IC1303 | 8-759-650-28 | IC RN5RZ59BA-TL | | L1551 | 1-469-525-91 | INDUCTOR | 10uH |
| IC1501 | 8-752-386-72 | IC CXD2444R-T4 | | L1552 | 1-469-525-91 | INDUCTOR | 10uH |
| IC1502 | 8-759-638-69 | IC VSP2200Y-2K | | L1553 | 1-469-525-91 | INDUCTOR | 10uH |
| IC1552 | 8-759-444-87 | IC NJM324V (TE2) | | L2201 | 1-469-525-91 | INDUCTOR | 10uH |
| IC1553 | 8-759-637-96 | IC uPD16877MA-6A5-E2 | | L2202 | 1-469-525-91 | INDUCTOR | 10uH |
| IC2201 | 8-752-402-75 | IC CXD1453R | | L2203 | 1-469-525-91 | INDUCTOR | 10uH |
| IC2202 | 8-759-058-60 | IC TC7SU04FU (TE85R) | | L2204 | 1-469-525-91 | INDUCTOR | 10uH |
| IC2291 | 8-759-169-02 | IC MB88344BPFV-G-BND-ER | | L2207 | 1-412-945-11 | INDUCTOR | 3.3uH |
| | | (TRV320/TRV320P/TRV520/TRV520P/ TRV525/TRV720) | | L2208 | 1-469-525-91 | INDUCTOR | 10uH |
| IC2291 | 8-759-536-93 | IC M62371GP-600D | | L2209 | 1-469-525-91 | INDUCTOR | 10uH |
| | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | L2291 | 1-469-525-91 | INDUCTOR | 10uH |
| IC3101 | 8-752-086-52 | IC CXA2071R-T4 | | L3102 | 1-469-525-91 | INDUCTOR | 10uH |
| IC3102 | 8-759-195-81 | IC TC7S86FU (TE85R) | | L3103 | 1-469-525-91 | INDUCTOR | 10uH |
| IC3103 | 8-752-086-53 | IC CXA2072R-T4 | | L3104 | 1-469-525-91 | INDUCTOR | 10uH |
| IC3201 | 8-752-093-69 | IC CXA3265R-T4 | | L3105 | 1-414-406-11 | INDUCTOR | 220uH |
| IC3202 | 8-759-075-70 | IC TA75S393F-TE85R | | L3106 | 1-412-952-11 | INDUCTOR | 12uH |
| IC3301 | 8-759-650-74 | IC CAIN | | L3201 | 1-469-526-91 | INDUCTOR | 22uH |
| IC3302 | 8-759-641-50 | IC MB90099PFV-G-102-BND-ER | | L3303 | 1-412-936-11 | INDUCTOR | 0.56uH |
| IC3303 | 8-759-566-52 | IC SN104266PN-TEB | | L3304 | 1-414-246-11 | INDUCTOR | 1.8uH |
| IC3603 | 8-759-653-60 | IC MB87L1241PFV-G-BND-ER | | L3305 | 1-469-525-91 | INDUCTOR | 10uH |
| | | | | L3306 | 1-469-525-91 | INDUCTOR | 10uH |
| | | | | L3307 | 1-469-525-91 | INDUCTOR | 10uH |

| Ref. No. | Part No. | Description | Remark |
|----------------|--------------|--|--------|
| L3601 | 1-469-525-91 | INDUCTOR 10uH | |
| L3602 | 1-469-525-91 | INDUCTOR 10uH | |
| L3701 | 1-469-525-91 | INDUCTOR 10uH | |
| L3705 | 1-469-525-91 | INDUCTOR 10uH | |
| L5701 | 1-414-754-11 | INDUCTOR 10uH | |
| < TRANSISTOR > | | | |
| Q1101 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q1102 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q1103 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1104 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) (TRV320/TRV320E/TRV320P/TRV420E/ TRV520/TRV520E/TRV520P) | |
| Q1301 | 8-729-043-60 | TRANSISTOR CPH6102-TL | |
| Q1302 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| Q1303 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| Q1304 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| Q1305 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| Q1306 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| Q1307 | 8-729-044-58 | TRANSISTOR SI2304DS-T1 | |
| Q1308 | 8-729-044-58 | TRANSISTOR SI2304DS-T1 | |
| Q1309 | 8-729-046-98 | TRANSISTOR CPH6702-TL | |
| Q1310 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1311 | 8-729-017-61 | TRANSISTOR 2SB1581-T1 | |
| Q1312 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1313 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1314 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q1315 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1316 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1317 | 8-729-037-74 | TRANSISTOR UN9213J- (K8) .SO (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | |
| Q1318 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1319 | 8-729-041-23 | TRANSISTOR MGSF1P02LT1 (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | |
| Q1320 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1321 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1322 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1323 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1324 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1325 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1326 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1551 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q1552 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1553 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q1554 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q2204 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q2206 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3102 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3103 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q3104 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3105 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q3106 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q3107 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3108 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3109 | 8-729-042-58 | TRANSISTOR RN2102F (TPL3) | |
| Q3110 | 8-729-042-58 | TRANSISTOR RN2102F (TPL3) | |
| Q3111 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |

| Ref. No. | Part No. | Description | Remark |
|--------------|--------------|--|--------|
| Q3112 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3113 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3114 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3115 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3116 | 8-729-047-19 | TRANSISTOR 2SA1965-S-TL | |
| Q3201 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q3301 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) (TRV525/TRV620E/TRV720/TRV720E) | |
| Q3302 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3303 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) (TRV525/TRV620E/TRV720/TRV720E) | |
| Q3304 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3305 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3306 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3307 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3308 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3602 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3603 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q3604 | 8-729-807-86 | TRANSISTOR 2SB1295-UL5/6-TB | |
| Q3605 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q3606 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q3701 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q4401 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q4402 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q4801 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q4802 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q4803 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q4804 | 8-729-041-43 | TRANSISTOR HN1L02FU (TE85R) | |
| Q4805 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q4806 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q4807 | 8-729-042-29 | TRANSISTOR RN1104F (TPL3) | |
| Q4808 | 8-729-037-61 | TRANSISTOR RN2104F (TPL3) | |
| Q4809 | 8-729-037-53 | TRANSISTOR 2SA1832F-Y/GR (TPL3) | |
| Q4810 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8) .SO | |
| Q4811 | 8-729-042-57 | TRANSISTOR UN9110J- (K8) .SO | |
| Q4812 | 8-729-037-71 | TRANSISTOR UN9210J- (K8) .SO | |
| Q4901 | 8-729-045-71 | TRANSISTOR RN1102F (TPL3) | |
| Q5701 | 8-729-045-78 | TRANSISTOR RN1110F (TPL3) | |
| Q5703 | 8-729-045-78 | TRANSISTOR RN1110F (TPL3) | |
| Q5704 | 8-729-045-78 | TRANSISTOR RN1110F (TPL3) | |
| Q5706 | 8-729-045-78 | TRANSISTOR RN1110F (TPL3) | |
| Q5708 | 8-729-037-63 | TRANSISTOR RN2111F (TPL3) | |
| Q5714 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| Q5715 | 8-729-037-52 | TRANSISTOR 2SC4738F-Y/GR (TPL3) | |
| < RESISTOR > | | | |
| R1101 | 1-218-990-11 | SHORT 0 | |
| R1124 | 1-218-990-11 | SHORT 0 | |
| R1127 | 1-218-974-11 | RES-CHIP 56K 5% 1/16W (TRV320/TRV320P/TRV520/TRV520P) | |
| R1127 | 1-218-965-11 | RES-CHIP 10K 5% 1/16W (TRV320E: E, HK, AUS, CN/TRV420E: CN/ TRV520E: E, HK, AUS, CN, JE) | |
| R1127 | 1-218-969-11 | RES-CHIP 22K 5% 1/16W (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |
| R1127 | 1-218-973-11 | RES-CHIP 47K 5% 1/16W (TRV620E/TRV720E) | |
| R1127 | 1-218-977-11 | RES-CHIP 100K 5% 1/16W (TRV525/TRV720) | |
| R1128 | 1-218-975-11 | RES-CHIP 68K 5% 1/16W (TRV320/TRV320P/TRV520/TRV520P) | |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|-------------|--------|------|---|----------|--------------|-------------|--------|------|---|
| R1128 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W (TRV525/TRV720) | R1328 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) |
| R1128 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | R1329 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) |
| R1129 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R1330 | 1-208-935-11 | METAL CHIP | 100K | 0.5% | 1/16W |
| R1130 | 1-218-990-11 | SHORT | 0 | | | R1331 | 1-218-968-11 | RES-CHIP | 18K | 5% | 1/16W |
| R1131 | 1-218-975-11 | RES-CHIP | 68K | 5% | 1/16W (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | R1332 | 1-208-943-11 | METAL CHIP | 220K | 0.5% | 1/16W |
| R1131 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | R1333 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R1132 | 1-218-974-11 | RES-CHIP | 56K | 5% | 1/16W (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | R1334 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R1132 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | R1335 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R1137 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R1336 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R1141 | 1-216-295-91 | SHORT | 0 | | | R1337 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R1142 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R1338 | 1-208-935-11 | METAL CHIP | 100K | 0.5% | 1/16W |
| R1143 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R1339 | 1-208-927-11 | METAL CHIP | 47K | 0.5% | 1/16W |
| R1144 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R1340 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W |
| R1145 | 1-218-990-11 | SHORT | 0 | | | R1341 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R1146 | 1-218-951-11 | RES-CHIP | 680 | 5% | 1/16W | R1342 | 1-208-943-11 | METAL CHIP | 220K | 0.5% | 1/16W |
| R1147 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R1343 | 1-208-931-11 | METAL CHIP | 68K | 0.5% | 1/16W |
| R1301 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | R1344 | 1-218-990-11 | SHORT | 0 | | (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E/TRV720/TRV720E) |
| R1302 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W | R1345 | 1-218-990-11 | SHORT | 0 | | |
| R1303 | 1-218-985-11 | METAL CHIP | 470K | 0.5% | 1/16W | R1347 | 1-208-715-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| R1304 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W | R1348 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W |
| R1305 | 1-218-990-11 | SHORT | 0 | | | R1501 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R1306 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | R1502 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R1307 | 1-218-990-11 | SHORT | 0 | | | R1503 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R1308 | 1-218-990-11 | SHORT | 0 | | | R1504 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W |
| R1309 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R1505 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W |
| R1310 | 1-218-990-11 | SHORT | 0 | | | R1511 | 1-218-990-11 | SHORT | 0 | | |
| R1311 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W | R1512 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R1312 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R1514 | 1-218-990-11 | SHORT | 0 | | |
| R1313 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | R1520 | 1-218-990-11 | SHORT | 0 | | |
| R1314 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | R1551 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R1315 | 1-218-990-11 | SHORT | 0 | | | R1552 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R1316 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R1553 | 1-216-295-91 | SHORT | 0 | | |
| R1317 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R1555 | 1-218-975-11 | RES-CHIP | 68K | 5% | 1/16W |
| R1318 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R1556 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R1319 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R1557 | 1-218-975-11 | RES-CHIP | 68K | 5% | 1/16W |
| R1320 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | R1558 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R1321 | 1-208-715-11 | METAL CHIP | 22K | 0.5% | 1/16W | R1559 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R1322 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R1560 | 1-218-929-11 | RES-CHIP | 10 | 5% | 1/16W |
| R1323 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R1561 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R1324 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E/TRV720/TRV720E) | R1562 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R1325 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP/TRV525/ TRV620E/TRV720/TRV720E) | R1563 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R1326 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R1564 | 1-218-981-11 | RES-CHIP | 220K | 5% | 1/16W |
| R1327 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W | R1565 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| | | | | | | R1566 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| | | | | | | R1567 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| | | | | | | R1568 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W |
| | | | | | | R1569 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| | | | | | | R1570 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| | | | | | | R1571 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| | | | | | | R1572 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| | | | | | | R1573 | 1-218-947-11 | RES-CHIP | 330 | 5% | 1/16W |
| | | | | | | R1574 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|----------|--------------|-------------|------|------|--------|
| R1575 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R1576 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R1577 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R2205 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R2206 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R2208 | 1-218-990-11 | SHORT | 0 | | |
| R2209 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R2210 | 1-218-954-11 | RES-CHIP | 1.2K | 5% | 1/16W |
| R2211 | 1-218-990-11 | SHORT | 0 | | |
| R2213 | 1-218-962-11 | RES-CHIP | 5.6K | 5% | 1/16W |
| R2215 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R2216 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W |
| R2218 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R2219 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W |
| R2220 | 1-218-972-11 | RES-CHIP | 39K | 5% | 1/16W |
| R2221 | 1-218-952-11 | RES-CHIP | 820 | 5% | 1/16W |
| R2222 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R2224 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R2225 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R2230 | 1-218-990-11 | SHORT | 0 | | |
| R2240 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R2242 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W |
| R2243 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W |
| R2244 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R2245 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R2247 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R2248 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R2254 | 1-218-990-11 | SHORT | 0 | | |
| R2255 | 1-218-990-11 | SHORT | 0 | | |
| R2256 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W |
| R3103 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3104 | 1-218-963-11 | RES-CHIP | 6.8K | 5% | 1/16W |
| R3105 | 1-218-990-11 | SHORT | 0 | | |
| R3106 | 1-218-990-11 | SHORT | 0 | | |
| R3107 | 1-218-979-11 | RES-CHIP | 150K | 5% | 1/16W |
| R3108 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R3109 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R3110 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3111 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R3112 | 1-218-939-11 | RES-CHIP | 68 | 5% | 1/16W |
| R3113 | 1-218-966-11 | RES-CHIP | 12K | 5% | 1/16W |
| R3114 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3115 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3116 | 1-218-990-11 | SHORT | 0 | | |
| R3117 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R3118 | 1-220-196-11 | METAL CHIP | 13K | 0.5% | 1/16W |
| R3119 | 1-218-970-11 | METAL CHIP | 27K | 0.5% | 1/16W |
| R3120 | 1-208-715-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| R3121 | 1-208-709-11 | METAL CHIP | 12K | 0.5% | 1/16W |
| R3122 | 1-208-931-11 | METAL CHIP | 68K | 0.5% | 1/16W |
| R3123 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R3124 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R3125 | 1-218-945-11 | METAL CHIP | 220 | 0.5% | 1/16W |
| R3126 | 1-218-969-11 | RES-CHIP | 22K | 5% | 1/16W |
| R3127 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W |
| R3128 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3129 | 1-218-945-11 | METAL CHIP | 220 | 0.5% | 1/16W |
| R3130 | 1-218-945-11 | METAL CHIP | 220 | 0.5% | 1/16W |
| R3131 | 1-218-945-11 | METAL CHIP | 220 | 0.5% | 1/16W |
| R3132 | 1-218-946-11 | RES-CHIP | 270 | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark |
|----------|--------------|-------------|------|------|---|
| R3133 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W |
| R3136 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R3137 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3138 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W |
| R3139 | 1-218-960-11 | RES-CHIP | 3.9K | 5% | 1/16W |
| R3140 | 1-218-960-11 | RES-CHIP | 3.9K | 5% | 1/16W |
| R3141 | 1-218-960-11 | RES-CHIP | 3.9K | 5% | 1/16W |
| R3142 | 1-218-960-11 | RES-CHIP | 3.9K | 5% | 1/16W |
| R3143 | 1-218-938-11 | RES-CHIP | 56 | 5% | 1/16W |
| R3144 | 1-218-950-11 | RES-CHIP | 560 | 5% | 1/16W |
| R3146 | 1-216-295-91 | SHORT | 0 | | |
| R3205 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R3206 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R3210 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3211 | 1-218-990-11 | SHORT | 0 | | |
| R3212 | 1-218-986-11 | RES-CHIP | 560K | 5% | 1/16W |
| R3213 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R3214 | 1-218-981-11 | RES-CHIP | 220K | 5% | 1/16W |
| R3215 | 1-208-939-11 | METAL CHIP | 150K | 0.5% | 1/16W |
| R3305 | 1-218-990-11 | SHORT | 0 | | |
| R3306 | 1-218-990-11 | SHORT | 0 | | |
| R3308 | 1-218-990-11 | SHORT | 0 | | |
| R3309 | 1-218-990-11 | SHORT | 0 | | |
| R3310 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3311 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3312 | 1-218-946-11 | RES-CHIP | 270 | 5% | 1/16W |
| R3313 | 1-218-990-11 | SHORT | 0 | | |
| R3314 | 1-218-990-11 | SHORT | 0 | | |
| R3315 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R3316 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R3317 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3318 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3319 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3320 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W |
| R3321 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3322 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W |
| R3323 | 1-218-947-11 | RES-CHIP | 330 | 5% | 1/16W |
| R3324 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3325 | 1-218-937-11 | RES-CHIP | 47 | 5% | 1/16W |
| R3326 | 1-218-990-11 | SHORT | 0 | | |
| R3327 | 1-208-886-81 | METAL CHIP | 910 | 0.5% | 1/16W (TRV525/TRV620E/TRV720/TRV720E) |
| R3328 | 1-218-849-11 | METAL CHIP | 1.2K | 0.5% | 1/16W |
| R3329 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W (TRV525/TRV620E/TRV720/TRV720E) |
| R3331 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3332 | 1-208-886-81 | METAL CHIP | 910 | 0.5% | 1/16W (TRV525/TRV620E/TRV720/TRV720E) |
| R3333 | 1-218-990-11 | SHORT | 0 | | |
| R3334 | 1-218-849-11 | METAL CHIP | 1.2K | 0.5% | 1/16W |
| R3335 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W (TRV525/TRV620E/TRV720/TRV720E) |
| R3336 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3337 | 1-218-990-11 | SHORT | 0 | | |
| R3338 | 1-218-955-11 | RES-CHIP | 1.5K | 5% | 1/16W (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) |
| R3338 | 1-208-886-81 | METAL CHIP | 910 | 0.5% | 1/16W (TRV525/TRV620E/TRV720/TRV720E) |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|-------------|--------|------|---|----------|--------------|-------------|--------|------|--|
| R3338 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | R3705 | 1-218-981-11 | RES-CHIP | 220K | 5% | 1/16W |
| R3340 | 1-218-849-11 | METAL CHIP | 1.2K | 0.5% | 1/16W | R3712 | 1-218-936-11 | RES-CHIP | 39 | 5% | 1/16W |
| R3341 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R3713 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R3343 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R3714 | 1-218-936-11 | RES-CHIP | 39 | 5% | 1/16W |
| R3346 | 1-218-990-11 | SHORT | 0 | | | R3715 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R3349 | 1-218-990-11 | SHORT | 0 | | | R3716 | 1-218-936-11 | RES-CHIP | 39 | 5% | 1/16W |
| R3350 | 1-218-990-11 | SHORT | 0 | | | R3717 | 1-218-935-11 | RES-CHIP | 33 | 5% | 1/16W |
| R3351 | 1-218-954-11 | RES-CHIP | 1.2K | 5% | 1/16W | R3721 | 1-208-715-11 | METAL CHIP | 22K | 0.5% | 1/16W |
| R3352 | 1-218-990-11 | SHORT | 0 | | | R3722 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R3356 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | R3724 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R3358 | 1-218-945-11 | RES-CHIP | 220 | 5% | 1/16W | R3726 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3360 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | R3727 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R3361 | 1-208-709-11 | METAL CHIP | 12K | 0.5% | 1/16W | R3728 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R3362 | 1-218-990-11 | SHORT | 0 | | | R3729 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R3364 | 1-208-709-11 | METAL CHIP | 12K | 0.5% | 1/16W | R3730 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R3365 | 1-218-990-11 | SHORT | 0 | | | R3734 | 1-216-295-91 | SHORT | 0 | | |
| R3367 | 1-218-938-11 | METAL CHIP | 56 | 0.5% | 1/16W | R4401 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R3368 | 1-218-938-11 | METAL CHIP | 56 | 0.5% | 1/16W | R4402 | 1-218-983-11 | RES-CHIP | 330K | 5% | 1/16W |
| R3369 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R4403 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R3370 | 1-218-938-11 | METAL CHIP | 56 | 0.5% | 1/16W | R4404 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R3371 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W | R4405 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R3372 | 1-218-938-11 | METAL CHIP | 56 | 0.5% | 1/16W | R4406 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R3375 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4407 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R3376 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4408 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W |
| R3377 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | R4409 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W |
| R3378 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | R4410 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W |
| R3379 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | R4411 | 1-216-023-00 | METAL CHIP | 82 | 5% | 1/10W |
| R3380 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | R4413 | 1-218-990-11 | SHORT | 0 | | |
| R3381 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | R4414 | 1-218-946-11 | RES-CHIP | 270 | 5% | 1/16W |
| R3382 | 1-218-990-11 | SHORT | 0 | | | R4416 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3383 | 1-218-990-11 | SHORT | 0 | | | R4417 | 1-208-707-11 | METAL CHIP | 10K | 0.5% | 1/16W |
| R3385 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R4423 | 1-218-990-11 | SHORT | 0 | | |
| R3386 | 1-216-864-11 | METAL CHIP | 0 | 5% | 1/16W | R4424 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) |
| R3387 | 1-218-990-11 | SHORT | 0 | | | R4424 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) |
| R3388 | 1-218-990-11 | SHORT | 0 | | | R4425 | 1-218-959-11 | RES-CHIP | 3.3K | 5% | 1/16W |
| R3604 | 1-218-990-11 | SHORT | 0 | | | R4426 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R3607 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4427 | 1-218-990-11 | SHORT | 0 | | |
| R3609 | 1-218-990-11 | SHORT | 0 | | | R4427 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) |
| R3611 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4428 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W |
| R3612 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R4429 | 1-217-671-11 | METAL CHIP | 1 | 5% | 1/10W |
| R3617 | 1-218-951-11 | RES-CHIP | 680 | 5% | 1/16W | R4430 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R3618 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4431 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) |
| R3622 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W | R4431 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) |
| R3636 | 1-218-990-11 | SHORT | 0 | | | R4432 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R3639 | 1-218-990-11 | SHORT | 0 | | | R4434 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3643 | 1-218-990-11 | SHORT | 0 | | | R4435 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R3652 | 1-218-990-11 | SHORT | 0 | | | R4436 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R3656 | 1-218-990-11 | SHORT | 0 | | | R4437 | 1-218-990-11 | SHORT | 0 | | |
| R3657 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4438 | 1-218-990-11 | SHORT | 0 | | |
| R3658 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4442 | 1-218-990-11 | SHORT | 0 | | |
| R3659 | 1-218-960-11 | RES-CHIP | 3.9K | 5% | 1/16W | | | | | | |
| R3660 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | | | | | | |
| R3701 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | | | | | | |
| R3702 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | | | | | | |
| R3704 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | | | | | | |

| Ref. No. | Part No. | Description | Remark | | | Ref. No. | Part No. | Description | Remark | | |
|----------|--------------|-------------|--------|----|-------|----------|--------------|-------------|--------|------|-------|
| R4443 | 1-218-990-11 | SHORT | 0 | | | R4829 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4444 | 1-218-990-11 | SHORT | 0 | | | R4830 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4445 | 1-218-990-11 | SHORT | 0 | | | R4831 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4446 | 1-218-990-11 | SHORT | 0 | | | R4832 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R4447 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W | R4833 | 1-218-985-11 | METAL CHIP | 470K | 0.5% | 1/16W |
| R4448 | 1-218-971-11 | RES-CHIP | 33K | 5% | 1/16W | R4834 | 1-218-985-11 | METAL CHIP | 470K | 0.5% | 1/16W |
| R4502 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4835 | 1-218-989-11 | METAL CHIP | 1M | 0.5% | 1/16W |
| R4503 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4836 | 1-218-989-11 | METAL CHIP | 1M | 0.5% | 1/16W |
| R4504 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4837 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4505 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4838 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4507 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4839 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4508 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4840 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4511 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4841 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4512 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R4842 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4514 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4843 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4515 | 1-218-990-11 | SHORT | 0 | | | R4844 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4516 | 1-218-990-11 | SHORT | 0 | | | R4845 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4517 | 1-218-990-11 | SHORT | 0 | | | R4846 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4518 | 1-218-990-11 | SHORT | 0 | | | R4847 | 1-218-979-11 | RES-CHIP | 150K | 5% | 1/16W |
| R4520 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4848 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4521 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4849 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4522 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4850 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W |
| R4523 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4851 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4524 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4852 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R4525 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4853 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R4526 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4856 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4527 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4861 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4528 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4862 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4529 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4863 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R4530 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W | R4864 | 1-218-986-11 | RES-CHIP | 560K | 5% | 1/16W |
| R4531 | 1-218-990-11 | SHORT | 0 | | | R4866 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4532 | 1-218-990-11 | SHORT | 0 | | | R4867 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4533 | 1-218-990-11 | SHORT | 0 | | | R4868 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4534 | 1-218-990-11 | SHORT | 0 | | | R4869 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4801 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R4871 | 1-218-989-11 | RES-CHIP | 1M | 5% | 1/16W |
| R4802 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R4872 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4803 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4873 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4804 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R4874 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4806 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4875 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4807 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | R4876 | 1-219-570-11 | RES-CHIP | 10M | 5% | 1/16W |
| R4808 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4877 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4809 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4878 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4810 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4879 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4811 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4880 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4813 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4881 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4814 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4882 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R4815 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4883 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| R4816 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4884 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4817 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4885 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4818 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4886 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4819 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4887 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4820 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R4888 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4821 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | R4892 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4822 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | R4894 | 1-218-990-11 | SHORT | 0 | | |
| R4823 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R4895 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R4824 | 1-218-958-11 | RES-CHIP | 2.7K | 5% | 1/16W | R4897 | 1-218-990-11 | SHORT | 0 | | |
| R4825 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4898 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R4826 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4899 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W |
| R4827 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4901 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W |
| R4828 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | R4902 | 1-218-986-11 | RES-CHIP | 560K | 5% | 1/16W |

| Ref. No. | Part No. | Description | | | Remark | Ref. No. | Part No. | Description | | | Remark |
|----------|--------------|-------------|------|----|--------|---|--------------|---|----------|-----|--------|
| R4903 | 1-218-990-11 | SHORT | 0 | | | R5731 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R4904 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | | | | |
| R4906 | 1-218-990-11 | SHORT | 0 | | | R5732 | 1-218-949-11 | RES-CHIP | 470 | 5% | 1/16W |
| R4908 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R5733 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W |
| | | | | | | R5735 | 1-218-990-11 | SHORT | 0 | | |
| R4910 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R5736 | 1-218-990-11 | SHORT | 0 | | |
| R4911 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | R5737 | 1-218-990-11 | SHORT | 0 | | |
| R4912 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | | | | | | |
| R4913 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | R5738 | 1-218-990-11 | SHORT | 0 | | |
| R4914 | 1-218-990-11 | SHORT | 0 | | | R5739 | 1-218-990-11 | SHORT | 0 | | |
| | | | | | | R5740 | 1-218-990-11 | SHORT | 0 | | |
| R4915 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R5741 | 1-218-990-11 | SHORT | 0 | | |
| R4916 | 1-218-961-11 | RES-CHIP | 4.7K | 5% | 1/16W | R5742 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R4917 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | | | | | | |
| R4918 | 1-218-957-11 | RES-CHIP | 2.2K | 5% | 1/16W | R5743 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R4919 | 1-218-990-11 | SHORT | 0 | | | R5744 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| | | | | | | R5745 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R4920 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R5746 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W |
| R4921 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | R5747 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W |
| R4922 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | | | | | | |
| R4923 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | | | < TRANSFORMER > | | | |
| R4924 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | T1301 | 1-435-252-11 | TRANSFORMER, DC-DC CONVERTER | | | |
| | | | | | | | | | | | |
| R4925 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | | | | | | |
| R4926 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | | | < VIBRATOR > | | | |
| R4927 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | | | | | | |
| R4928 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | X1501 | 1-767-586-21 | VIBRATOR, CRYSTAL (27MHZ) | | | |
| R4929 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | (TRV320/TRV320P/TRV520/TRV520P/TRV525/ TRV720) | | | |
| | | | | | | X1501 | 1-767-400-11 | VIBRATOR, CRYSTAL (36MHz) | | | |
| R4930 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) | | | |
| R4931 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | X3301 | 1-767-399-11 | VIBRATOR, CRYSTAL (24.576MHZ) | | | |
| R4932 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | X4801 | 1-767-980-21 | VIBRATOR, CERAMIC (20MHZ) | | | |
| R4933 | 1-218-990-11 | SHORT | 0 | | | X4802 | 1-760-458-21 | VIBRATOR, CRYSTAL (32.768KHZ) | | | |
| R4934 | 1-218-990-11 | SHORT | 0 | | | | | | | | |
| | | | | | | X4901 | 1-760-655-41 | VIBRATOR, CRYSTAL (20MHZ) | | | |
| R4935 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | | | | |
| R4936 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | | | | |
| R4938 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | | | | |
| R4939 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | | | | |
| R4940 | 1-218-977-11 | RES-CHIP | 100K | 5% | 1/16W | | | | | | |
| | | | | | | | | | | | |
| R4941 | 1-218-990-11 | SHORT | 0 | | | A-7073-838-A VF-129 BOARD, COMPLETE | | | | | |
| R4942 | 1-218-990-11 | SHORT | 0 | | | (TRV320/TRV320P/TRV520/TRV520P) | | | | | |
| R4943 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | A-7073-855-A VF-129 BOARD, COMPLETE | | | | | |
| R4944 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | (TRV320E: E, HK, AUS, CN/TRV420E: CN/ TRV520E: E, HK, AUS, CN, JE) | | | | | |
| R5701 | 1-218-990-11 | SHORT | 0 | | | ***** (Ref. No.: 20, 000 Series) | | | | | |
| | | | | | | | | | | | |
| R5702 | 1-218-990-11 | SHORT | 0 | | | < CAPACITOR > | | | | | |
| R5707 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | | | | | | |
| R5708 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | C901 | 1-107-854-11 | TANTAL. CHIP | 68uF | 20% | 6.3V |
| R5709 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | C902 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| R5710 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | C903 | 1-135-145-11 | TANTALUM CHIP | 0.47uF | 10% | 35V |
| | | | | | | C904 | 1-162-965-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| R5711 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | C905 | 1-104-752-11 | TANTAL. CHIP | 33uF | 20% | 6.3V |
| R5712 | 1-218-941-11 | RES-CHIP | 100 | 5% | 1/16W | | | | | | |
| R5714 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | C906 | 1-162-638-11 | CERAMIC CHIP | 1uF | | 16V |
| R5715 | 1-218-965-11 | RES-CHIP | 10K | 5% | 1/16W | C907 | 1-104-563-11 | FILM CHIP | 0.1uF | 5% | 16V |
| R5717 | 1-218-953-11 | RES-CHIP | 1K | 5% | 1/16W | C908 | 1-162-920-11 | CERAMIC CHIP | 27PF | 5% | 50V |
| | | | | | | C909 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| R5718 | 1-218-967-11 | RES-CHIP | 15K | 5% | 1/16W | △C910 | 1-162-625-11 | CERAMIC CHIP | 0.0047uF | 5% | 50V |
| R5719 | 1-218-976-11 | RES-CHIP | 82K | 5% | 1/16W | | | | | | |
| R5720 | 1-218-979-11 | RES-CHIP | 150K | 5% | 1/16W | △C911 | 1-164-715-11 | CERAMIC CHIP | 0.0068uF | 5% | 50V |
| R5721 | 1-218-973-11 | RES-CHIP | 47K | 5% | 1/16W | C912 | 1-107-854-11 | TANTAL. CHIP | 68uF | 20% | 6.3V |
| R5722 | 1-218-990-11 | SHORT | 0 | | | C913 | 1-135-145-11 | TANTALUM CHIP | 0.47uF | 10% | 35V |
| | | | | | | C914 | 1-113-984-11 | TANTAL. CHIP | 1.5uF | 20% | 35V |
| R5723 | 1-218-990-11 | SHORT | 0 | | | C915 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| R5724 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | | | | | | |
| R5725 | 1-218-985-11 | RES-CHIP | 470K | 5% | 1/16W | C916 | 1-164-611-11 | CERAMIC CHIP | 0.001uF | 10% | 500V |
| R5730 | 1-218-952-11 | RES-CHIP | 820 | 5% | 1/16W | | | | | | |

A-7073-838-A VF-129 BOARD, COMPLETE
(TRV320/TRV320P/TRV520/TRV520P)
A-7073-855-A VF-129 BOARD, COMPLETE
(TRV320E: E, HK, AUS, CN/TRV420E: CN/
TRV520E: E, HK, AUS, CN, JE)

(Ref. No.: 20, 000 Series)

< CAPACITOR >

| | | | | | |
|-------|--------------|---------------|----------|-----|------|
| C901 | 1-107-854-11 | TANTAL. CHIP | 68uF | 20% | 6.3V |
| C902 | 1-163-038-91 | CERAMIC CHIP | 0.1uF | | 25V |
| C903 | 1-135-145-11 | TANTALUM CHIP | 0.47uF | 10% | 35V |
| C904 | 1-162-965-11 | CERAMIC CHIP | 0.0015uF | 10% | 50V |
| C905 | 1-104-752-11 | TANTAL. CHIP | 33uF | 20% | 6.3V |
| C906 | 1-162-638-11 | CERAMIC CHIP | 1uF | | 16V |
| C907 | 1-104-563-11 | FILM CHIP | 0.1uF | 5% | 16V |
| C908 | 1-162-920-11 | CERAMIC CHIP | 27PF | 5% | 50V |
| C909 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| △C910 | 1-162-625-11 | CERAMIC CHIP | 0.0047uF | 5% | 50V |
| △C911 | 1-164-715-11 | CERAMIC CHIP | 0.0068uF | 5% | 50V |
| C912 | 1-107-854-11 | TANTAL. CHIP | 68uF | 20% | 6.3V |
| C913 | 1-135-145-11 | TANTALUM CHIP | 0.47uF | 10% | 35V |
| C914 | 1-113-984-11 | TANTAL. CHIP | 1.5uF | 20% | 35V |
| C915 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C916 | 1-164-611-11 | CERAMIC CHIP | 0.001uF | 10% | 500V |

The components identified by
mark △ or dotted line with
mark △ are critical for safety.
Replace only with part num-
ber specified.

Les composants identifiés par une
marque △ sont critiques pour la
sécurité.
Ne les remplacer que par une pièce
portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark |
|----------------|--------------|--|--------|
| < CONNECTOR > | | | |
| * CN901 | 1-785-379-01 | HOUSING, CONNECTOR 4P | |
| * CN902 | 1-580-057-11 | PIN, CONNECTOR (SMD) 4P | |
| < DIODE > | | | |
| D901 | 8-719-951-21 | DIODE PR1102W-TR (TALLY) | |
| D903 | 8-719-073-01 | DIODE MA111- (K8) .S0 | |
| < IC > | | | |
| IC901 | 8-759-196-14 | IC BA7149F-E2 | |
| < COIL > | | | |
| L901 | 1-412-031-11 | INDUCTOR CHIP 47uH | |
| L902 | 1-410-387-11 | INDUCTOR CHIP 33uH | |
| △L903 | 1-411-697-11 | COIL, FERRITE (HLC) | |
| < TRANSISTOR > | | | |
| Q901 | 8-729-230-63 | TRANSISTOR 2SD1819A-QRS-TX | |
| Q902 | 8-729-106-68 | TRANSISTOR 2SD1615-T1GLGK | |
| Q903 | 8-729-216-31 | TRANSISTOR 2SA1163G-TE85L | |
| Q904 | 8-729-230-63 | TRANSISTOR 2SD1819A-QRS-TX | |
| < RESISTOR > | | | |
| R901 | 1-216-817-11 | METAL CHIP 470 5% 1/16W | |
| R902 | 1-216-817-11 | METAL CHIP 470 5% 1/16W | |
| R903 | 1-216-055-00 | METAL CHIP 1.8K 5% 1/10W | |
| R904 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R905 | 1-216-822-11 | METAL CHIP 1.2K 5% 1/16W | |
| R906 | 1-216-823-11 | METAL CHIP 1.5K 5% 1/16W | |
| R907 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | |
| R908 | 1-216-852-11 | METAL CHIP 390K 5% 1/16W | |
| R909 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | |
| R910 | 1-216-835-11 | METAL CHIP 15K 5% 1/16W | |
| R911 | 1-216-160-00 | RES-CHIP 27 5% 1/8W | |
| R912 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R915 | 1-218-879-11 | METAL CHIP 22K 0.5% 1/16W | |
| R916 | 1-218-881-11 | METAL CHIP 27K 0.5% 1/16W (TRV320E: E, HK, AUS, CN/TRV420E: CN/ TRV520E: E, HK, AUS, CN, JE) | |
| R917 | 1-218-893-11 | METAL CHIP 82K 0.5% 1/16W (TRV320E: E, HK, AUS, CN/TRV420E: CN/ TRV520E: E, HK, AUS, CN, JE) | |
| R917 | 1-218-891-11 | METAL CHIP 68K 0.5% 1/16W (TRV320/TRV320P/TRV520/TRV520P) | |
| R918 | 1-216-829-11 | METAL CHIP 4.7K 5% 1/16W | |
| R919 | 1-216-843-11 | METAL CHIP 68K 5% 1/16W | |
| R920 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W | |
| R921 | 1-216-795-11 | RES-CHIP 6.8 5% 1/16W | |
| R922 | 1-216-850-11 | METAL CHIP 270K 5% 1/16W | |
| R923 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R924 | 1-216-862-11 | RES-CHIP 2.7M 5% 1/16W | |
| R925 | 1-216-862-11 | RES-CHIP 2.7M 5% 1/16W | |
| R926 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R927 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R928 | 1-216-827-11 | METAL CHIP 3.3K 5% 1/16W | |
| R929 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R930 | 1-216-791-11 | METAL CHIP 3.3 5% 1/16W | |

| Ref. No. | Part No. | Description | Remark |
|---|--------------|-----------------------------|--------|
| R931 | 1-217-671-11 | METAL CHIP 1 5% 1/10W | |
| R932 | 1-216-829-11 | METAL CHIP 4.7K 5% 1/16W | |
| < VARIABLE RESISTOR > | | | |
| RV903 | 1-238-852-11 | RES, ADJ, CERMET 470 | |
| RV904 | 1-238-095-11 | RES, ADJ, CERMET 470K | |
| < TRANSFORMER > | | | |
| △T901 | 1-453-124-11 | TRANSFORMER ASSY, FLYBACK | |
| < FLAT CABLE > | | | |
| △W901 | 1-540-019-21 | SOCKET ASSY, CRT | |
| A-7074-352-A VF-141 BOARD, COMPLETE (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | | | |
| A-7074-193-A VF-141 BOARD, COMPLETE (TRV525/TRV620E/TRV720/TRV720E) | | | |
| ***** (Ref. No.: 20, 000 Series) | | | |
| < CAPACITOR > | | | |
| C4501 | 1-135-259-11 | TANTAL. CHIP 10uF 20% 6.3V | |
| C4503 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4504 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4507 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C4508 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C4509 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C4510 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4511 | 1-164-739-11 | CERAMIC CHIP 560PF 5% 50V | |
| C4512 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4513 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4514 | 1-107-687-11 | TANTAL. CHIP 3.3uF 20% 20V | |
| C4515 | 1-164-357-11 | CERAMIC CHIP 1000PF 5% 50V | |
| C4516 | 1-162-928-11 | CERAMIC CHIP 120PF 5% 50V | |
| C4517 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4518 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| C4519 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| C4520 | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V | |
| C4521 | 1-107-826-91 | CERAMIC CHIP 0.1uF 10% 16V | |
| C4523 | 1-115-566-11 | CERAMIC CHIP 4.7uF 10% 10V | |
| C4524 | 1-164-505-11 | CERAMIC CHIP 2.2uF 16V | |
| C4526 | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V | |
| C4527 | 1-107-725-11 | CERAMIC CHIP 0.1uF 10% 16V | |
| < CONNECTOR > | | | |
| CN4501 | 1-764-526-11 | CONNECTOR, FFC/FPC 18P | |
| CN4502 | 1-750-630-11 | CONNECTOR, FFC/FPC 16P | |
| < DIODE > | | | |
| D4502 | 8-713-102-80 | DIODE 1T369-01-T8A | |
| D4503 | 8-719-077-74 | DIODE MA2S784008S0 | |
| D4504 | 8-719-077-74 | DIODE MA2S784008S0 | |
| < FERRITE BEAD > | | | |
| FB4502 | 1-500-329-21 | INDUCTOR CHIP 0uH | |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|------------------------|--------------|---|--------|----------|--------------|--|--------|
| FB4505 | 1-500-329-21 | INDUCTOR CHIP 0uH < IC > | | 206 | 1-960-225-11 | HARNESS (DP-83) (TRV420E/TRV520/ TRV520E/TRV520P/TRV525/TRV620E) | |
| IC4501 | 8-759-591-95 | IC RB5P0040M1 (TRV525/TRV620E/TRV720/TRV720E) | | 210 | A-7094-826-A | INDICATION (LCD) BLOCK ASSY (SERVICE) (TRV420E/TRV520/TRV520E/TRV520P/ TRV525/TRV620E) | |
| IC4501 | 8-759-660-93 | IC RB5P004AM1 (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | | 212 | 1-418-803-11 | SWITCH BLOCK, CONTROL (BV-10000) (TRV420E/TRV520/TRV520E/TRV520P/ TRV525/TRV620E) | |
| IC4502 | 8-752-400-96 | IC CXD3501R-T4 < COIL > | | 257 | 1-418-801-11 | SWITCH BLOCK, CONTROL (MF-10000) (TRV720/TRV720E) | |
| L4501 | 1-469-525-91 | INDUCTOR 10uH | | 262 | 1-960-227-11 | HARNESS (DP-87) (TRV720/TRV720E) | |
| L4504 | 1-412-949-21 | INDUCTOR 6.8uH < TRANSISTOR > | | 304 | 1-418-802-11 | SWITCH BLOCK, PANEL REVERSE (PR-10000) (TRV720/TRV720E) | |
| Q4504 | 8-729-037-52 | TRANSISTOR 2SD2216J-QR (K8) .SO < RESISTOR > | | 306 | 1-960-225-11 | HARNESS (DP-83) (TRV720/TRV720E) | |
| R4505 | 1-216-853-11 | METAL CHIP 470K 5% 1/16W | | 310 | A-7094-826-A | INDICATION (LCD) BLOCK ASSY (SERVICE) (TRV720/TRV720E) | |
| R4507 | 1-218-895-11 | METAL CHIP 100K 0.5% 1/16W | | 312 | 1-418-803-11 | SWITCH BLOCK, CONTROL (BV-10000) (TRV720/TRV720E) | |
| R4508 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | | 359 | 1-792-454-11 | CABLE, FLEXIBLE FLAT (FFC-289) (TRV320/ TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | |
| R4513 | 1-216-835-11 | METAL CHIP 15K 5% 1/16W | | 401 | 1-676-299-11 | FP-151 FLEXIBLE BOARD (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP/ TRV525/TRV620E/TRV720/TRV720E) | |
| R4515 | 1-216-826-11 | METAL CHIP 2.7K 5% 1/16W | | 456 | 1-418-800-11 | SWITCH BLOCK, CONTROL (SS-10000) (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P/TRV525/TRV620E/ TRV720/TRV720E) | |
| R4516 | 1-216-841-11 | METAL CHIP 47K 5% 1/16W | | 456 | 1-418-800-31 | SWITCH BLOCK, CONTROL (SS-10000) (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |
| R4517 | 1-216-843-11 | METAL CHIP 68K 5% 1/16W | | 465 | 1-676-823-21 | FP-162 FLEXIBLE BOARD | |
| R4518 | 1-216-837-11 | METAL CHIP 22K 5% 1/16W | | 466 | 1-500-226-31 | BEAD, FERRITE | |
| R4520 | 1-216-843-11 | METAL CHIP 68K 5% 1/16W | | 469 | 1-960-596-11 | HARNESS (HT-054) | |
| R4521 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | | 501 | 1-793-996-11 | CONNECTOR, EXTERNAL | |
| R4522 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | | 507 | 1-676-822-11 | FP-161 FLEXIBLE BOARD | |
| R4524 | 1-216-844-11 | METAL CHIP 82K 5% 1/16W | | 509 | 1-758-155-21 | FILTER BLOCK, OPTICAL (TRV320E/TRV420E/ TRV520E/TRV620E/TRV720E) | |
| R4525 | 1-216-838-11 | METAL CHIP 27K 5% 1/16W | | 509 | 1-758-216-21 | FILTER BLOCK, OPTICAL (TRV320/TRV320P/ TRV520/TRV520P/TRV525/TRV720) | |
| R4526 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | | 511 | 8-848-736-01 | DEVICE, LENS LSV-680A | |
| R4527 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | | 512 | 1-758-445-11 | IRIS IR-680 (including FLEXIBLE BOARD) | |
| R4528 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | | 551 | 1-676-819-11 | FP-157 FLEXIBLE BOARD | |
| R4529 | 1-216-833-91 | RES-CHIP 10K 5% 1/16W | | 555 | 1-676-821-11 | FP-160 FLEXIBLE BOARD | |
| R4530 | 1-216-845-11 | METAL CHIP 100K 5% 1/16W | | 556 | 1-500-226-31 | BEAD, FERRITE | |
| R4534 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | | 558 | 1-676-820-11 | FP-159 FLEXIBLE BOARD | |
| R4542 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | | 565 | 1-418-799-11 | SWITCH BLOCK, CONTROL (FK-10000) (TRV320/TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P/TRV525/TRV620E/ TRV720/TRV720E) | |
| R4543 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | | 565 | 1-418-799-21 | SWITCH BLOCK, CONTROL (FK-10000) (TRV320E: AEP, UK, EE, NE, RU/TRV420E: AEP/TRV520E: AEP) | |
| R4544 | 1-216-853-11 | METAL CHIP 470K 5% 1/16W | | 760 | 1-658-213-11 | FP-355 FLEXIBLE BOARD | |
| MISCELLANEOUS ***** | | | | 762 | 1-657-786-13 | FP-221 FLEXIBLE BOARD | |
| 10 | 1-676-818-31 | FP-156 FLEXIBLE BOARD | | 764 | 1-658-214-11 | FP-356 FLEXIBLE BOARD | |
| 11 | 1-790-334-11 | CABLE, FLEXIBLE FLAT (FFC-257S) | | 803 | 1-657-785-11 | FP-248 FLEXIBLE BOARD | |
| 59 | 1-418-801-11 | SWITCH BLOCK, CONTROL (MF-10000) (TRV320/TRV320E/TRV320P) | | 817 | 1-657-784-11 | FP-220 FLEXIBLE BOARD | |
| 104 | 1-418-802-11 | SWITCH BLOCK, PANEL REVERSE (PR-10000) (TRV320/TRV320E/TRV320P) | | BT901 | 1-694-384-11 | TERMINAL BOARD, BATTERY | |
| 106 | 1-960-225-11 | HARNESS (DP-83) (TRV320/TRV320E/TRV320P) | | D001 | 8-719-988-42 | DIODE GL453 | |
| 110 | A-7094-826-A | INDICATION (LCD) BLOCK ASSY (SERVICE) (TRV320/TRV320E/TRV320P) | | | | | |
| 157 | 1-418-801-11 | SWITCH BLOCK, CONTROL (MF-10000) (TRV420E/TRV520/TRV520E/TRV520P/ TRV525/TRV620E) | | | | | |
| 204 | 1-418-802-11 | SWITCH BLOCK, PANEL REVERSE (PR-10000) (TRV420E/TRV520/TRV520E/TRV520P/ TRV525/TRV620E) | | | | | |

(Note) Be sure to read "Precuations for Replcement of
CCD Imager" on page 4-8, 4-10 when changing
the CCD imager

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|--|--------|
| IC101 | A-7030-821-A | CCD BLOCK ASSY (CCD IMAGER) (TRV320/TRV320P/TRV520/TRV520P/ TRV525/TRV720) (Note) | |
| IC151 | A-7031-072-A | CCD BLOCK ASSY (CCD IMAGER) (TRV320E/TRV420E/TRV520E/TRV620E/ TRV720E) (Note) | |
| LCD901 | 1-803-852-21 | INDICATOR MODULE, LIQUID CRYSTAL (2.5 LCD TYPE S 61K) | |
| LCD901 | 1-803-853-21 | INDICATOR MODULE, LIQUID CRYSTAL (2.5 LCD TYPE S 123K) | |
| LCD901 | 1-803-854-21 | INDICATOR MODULE, LIQUID CRYSTAL (3 LCD TYPE S) | |
| LCD901 | 1-803-855-21 | INDICATOR MODULE, LIQUID CRYSTAL (3.5 LCD TYPE S) | |
| LCD901 | 1-803-859-21 | INDICATOR MODULE, LIQUID CRYSTAL (2.5 LCD TYPE C 61K) | |
| LCD901 | 1-803-861-21 | INDICATOR MODULE, LIQUID CRYSTAL (3.5 LCD TYPE C) | |
| LCD901 | 1-803-863-21 | INDICATOR MODULE, LIQUID CRYSTAL (4 LCD TYPE C) | |
| LCD901 | 1-803-893-21 | INDICATOR MODULE, LIQUID CRYSTAL (4 LCD TYPE S) | |
| LCD903 | 8-753-026-74 | LCX032AK-1 (TRV525/TRV620E/TRV720/TRV720E) | |
| LCD903 | 8-753-026-76 | LCX032AL-5 (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP) | |
| △LED901 | 1-517-866-11 | LIGHT, BACK | |
| M901 | A-7048-938-A | DRUM BLOCK ASSY (DKH-02A-R) | |
| M902 | 8-835-531-32 | MOTOR, DC SCE-0601A/C-NP (CAPSTAN) | |
| M903 | X-3945-401-1 | MOTOR ASSY, DC (LOADING) | |
| M905 | 1-763-472-11 | MOTOR, STEPPING (F680) (FOCUS) | |
| M906 | 1-763-471-11 | MOTOR, STEPPING (Z680) (ZOOM) | |
| MIC5802 | 1-542-312-11 | MICROPHONE (L) | |
| MIC5803 | 1-542-312-11 | MICROPHONE (R) | |
| △ND901 | 1-517-751-11 | TUBE, FLUORESCENT, COLD CATHODE (2.5 LCD model) (TRV320/TRV320E: E, HK, AUS, CN/ TRV320P) | |
| △ND901 | 1-517-751-21 | TUBE, FLUORESCENT, COLD CATHODE (2.5 LCD model) (TRV320E: AEP, UK, EE, NE, RU) | |
| △ND901 | 1-517-852-21 | TUBE, FLUORESCENT, COLD CATHODE (4 LCD model) (TRV720/TRV720E) | |
| △ND901 | 1-517-855-21 | TUBE, FLUORESCENT, COLD CATHODE (3.5 LCD model) (TRV520/TRV520E/TRV520P/ TRV620E) | |
| △ND901 | 1-517-856-21 | TUBE, FLUORESCENT, COLD CATHODE (3 LCD model) (TRV420E/TRV525) | |
| S001 | 1-692-614-11 | SWITCH, PUSH (3 KEY) (Hi8 MP, ME/MP, REC PROOF) | |
| S002 | 1-572-688-11 | SWITCH, PUSH (1 KEY) (C LOCK) | |
| S008 | 1-771-848-11 | SWITCH, PUSH (PANEL OPEN/CLOSE) | |
| S901 | 1-762-436-15 | SWITCH (ENCODER), ROTARY | |
| SP003 | 1-529-590-11 | SPEAKER (2.0cm) | |
| △V901 | 1-452-673-61 | CRT ASSY (M01KXX90WB) (TRV320/ TRV320E: E, HK, AUS, CN/TRV320P/ TRV420E: CN/TRV520/TRV520E: E, HK, AUS, CN, JE/TRV520P) | |

| Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|
| | | ACCESSORIES & PACKING MATERIALS ***** | |
| △ | 1-475-141-61 | COMMANDER, REMOTE (RMT-814) | |
| △ | 1-475-599-11 | ADAPTOR, AC (EXCEPT TRV320: KR/ TRV520: KR/TRV720: KR) | |
| △ | 1-475-599-71 | ADAPTOR, AC (TRV320: KR/TRV520: KR/TRV720: KR) | |
| △ | 1-569-007-11 | ADAPTOR, CONVERSION 2P (TRV520: JE/TRV520E: JE) | |
| △ | 1-569-008-21 | ADAPTOR, CONVERSION 2P (TRV320: E, HK/TRV320E: E, HK/TRV320P/ TRV520: E, HK/TRV520E: E, HK/TRV520P: E/ TRV720: E/TRV720E: E, HK) | |
| △ | 1-573-291-11 | ADAPTOR, CONVERSION 21P (TRV320E: AEP, UK, EE, NE, RU/ TRV420E: AEP/TRV520E: AEP/TRV620E/ TRV720E: AEP) | |
| △ | 1-696-819-11 | CORD, POWER (TRV320E: AUS/TRV520E: AUS) | |
| | 1-765-080-11 | CORD, CONNECTION (AV CONNECTING CABLE 1.5m) | |
| △ | 1-769-608-11 | CORD, POWER (TRV320: E/TRV320E: AEP, EE, NE, RU, E/TRV320P/TRV420E: AEP/TRV520: E/ TRV520E: AEP, E/TRV520P: E/TRV620E: AEP/ TRV720: E/TRV720E: AEP, E) | |
| △ | 1-776-985-11 | CORD, POWER (TRV320: KR/TRV520: KR/TRV720: KR) | |
| △ | 1-782-476-11 | CORD, POWER (TRV320E: CN/TRV420E: CN/ TRV520E: CN/TRV720E: CN) | |
| △ | 1-783-374-11 | CORD, POWER (TRV320: HK/TRV320E: UK, HK/TRV520: HK/ TRV520E: HK/TRV620E: UK/TRV720E: HK) | |
| △ | 1-783-952-11 | CORD, POWER (TRV520P: AR) | |
| △ | 1-790-073-11 | CORD, POWER 2P (TRV520: JE/TRV520E: JE) | |
| △ | 1-790-107-22 | CORD, POWER (TRV320: US, CND/TRV520: US/TRV525/TRV720: US, CND) | |
| | 1-792-451-11 | CABLE, RS 232C | |
| | 3-058-871-11 | MANUAL, INSTRUCTION (ENGLISH) (TRV320: US, CND) | |
| | 3-058-871-21 | MANUAL, INSTRUCTION (FRENCH) (TRV320: CND) | |
| | 3-058-871-31 | MANUAL, INSTRUCTION (ENGLISH) (TRV320: E, HK/TRV320P) | |
| | 3-058-871-41 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV320: E/TRV320P) | |
| | 3-058-871-51 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV320: E, HK) | |
| | 3-058-871-61 | MANUAL, INSTRUCTION (ARABIC) (TRV320: E) | |
| | 3-058-871-71 | MANUAL, INSTRUCTION (KOREAN) (TRV320: KR) | |
| | 3-058-872-11 | MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV320E: AEP, UK) | |
| | 3-058-872-21 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV320E: AEP) | |
| | 3-058-872-31 | MANUAL, INSTRUCTION (ITALIAN, DUTCH) (TRV320E: AEP, EE, NE, RU) | |
| | 3-058-872-41 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (TRV320E: EE, NE, RU) | |
| | 3-058-872-51 | MANUAL, INSTRUCTION (POLISH, SWEDISH) (TRV320E: AEP) | |
| | 3-058-873-11 | MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV320E: E, HK, AUS, CN) | |

(Note) Be sure to read "Precautions for Replacement of CCD Imager" on page 4-8, 4-10 when changing the CCD imager

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---|--------|----------|--------------|---|--------|
| | 3-058-873-21 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (TRV320E: E) | | | 3-059-565-41 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (TRV720E: AEP) | |
| | 3-058-873-31 | MANUAL, INSTRUCTION (ARABIC, PERSIAN) (TRV320E: E) | | | 3-059-566-11 | MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV720E: E, HK, CN) | |
| | 3-058-873-41 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV320E: HK) | | | 3-059-566-21 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (TRV720E: E) | |
| | 3-058-873-51 | MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (TRV320E: E, CN) | | | 3-059-566-31 | MANUAL, INSTRUCTION (ARABIC, PERSIAN) (TRV720E: E) | |
| | 3-059-561-11 | MANUAL, INSTRUCTION (ENGLISH) (TRV520: US/TRV525) | | | 3-059-566-41 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV720E: HK) | |
| | 3-059-561-21 | MANUAL, INSTRUCTION (FRENCH) (TRV525: CND) | | | 3-059-566-51 | MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (TRV720E: E, CN) | |
| | 3-059-561-31 | MANUAL, INSTRUCTION (ENGLISH) (TRV520: E, HK, JE/TRV520P: E) | | | 3-060-457-11 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (ENGLISH) (TRV320: US, CND, E, HK/ TRV320P/TRV520: US, E, HK, JE/ TRV520P: E/TRV525/TRV720: US, CND, E) | |
| | 3-059-561-41 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV520: E, JE/TRV520P) | | | 3-060-457-21 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (FRENCH) (TRV320: CND/TRV525: CND/TRV720: CND) | |
| | 3-059-561-51 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV520: E, HK) | | | 3-060-457-31 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (TRADITIONAL CHINESE) (TRV320: E, HK/ TRV320E: HK/TRV520: E, HK/TRV520E: HK/ TRV720: E/TRV720E: HK) | |
| | 3-059-561-61 | MANUAL, INSTRUCTION (ARABIC) (TRV520: E) | | | 3-060-457-41 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (KOREAN) (TRV320: KR/TRV520: KR, JE/ TRV720: KR) | |
| | 3-059-561-71 | MANUAL, INSTRUCTION (KOREAN) (TRV520: KR, JE) | | | 3-060-458-11 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (ENGLISH, RUSSIAN) (TRV320E: AEP, UK, E, HK, AUS, CN/TRV420E/ TRV520E/TRV620E/TRV720E) | |
| | 3-059-562-11 | MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV420E: AEP/TRV520E: AEP/TRV620E) | | | 3-060-458-21 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (FRENCH, GERMAN) (TRV320E: EE, NE, RU, E/TRV420E: AEP/ TRV520E: AEP, E, JE/TRV620E: AEP/ TRV720E: AEP, E) | |
| | 3-059-562-21 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV420E: AEP/ TRV520E: AEP/TRV620E: AEP) | | | 3-060-458-31 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (ITALIAN, DUTCH) (TRV320E: AEP, EE, NE, RU/TRV420E: AEP/ TRV520E: AEP/TRV620E: AEP/ TRV720E: AEP) | |
| | 3-059-562-31 | MANUAL, INSTRUCTION (ITALIAN, DUTCH) (TRV420E: AEP/TRV520E: AEP/TRV620E: AEP) | | | 3-060-458-41 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (SPANISH, PORTUGUESE) (TRV320: E/ TRV320E: AEP/TRV320P/TRV420E: AEP/TRV520: E, JE/TRV520E: AEP/TRV520P/ TRV620E: AEP/TRV720: E/TRV720E: AEP) | |
| | 3-059-562-41 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (TRV420E: AEP/TRV520E: AEP/TRV620E: AEP) | | | 3-060-458-51 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (POLISH, SWEDISH) (TRV320E: AEP) | |
| | 3-059-563-11 | MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV420E: CN/TRV520E: E, HK, AUS, CN, JE) | | | 3-060-458-61 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (ARABIC, PERSIAN) (TRV320: E/TRV320E: E/TRV520: E/ TRV520E: E/TRV720: E/TRV720E: E) | |
| | 3-059-563-21 | MANUAL, INSTRUCTION (FRENCH, GERMAN) (TRV520E: E, JE) | | | 3-060-458-71 | MANUAL, INSTRUCTION (Picture Gear 4.1 Lite) (SIMPLIFIED CHINESE) (TRV320E: E, CN/TRV420E: CN/TRV520E: E, CN, JE/TRV720E: E, CN) | |
| | 3-059-563-31 | MANUAL, INSTRUCTION (ARABIC, PERSIAN) (TRV520E: E) | | | 3-060-476-01 | DISK, SYSTEM (Picture Gear 4.1 Lite) | |
| | 3-059-563-41 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV520E: HK) | | | 3-742-854-01 | LID, BATTERY (for RMT-814) | |
| | 3-059-563-51 | MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (TRV420E: CN/TRV520E: E, CN, JE) | | | 3-987-015-01 | BELT (S), SHOULDER | |
| | 3-059-564-11 | MANUAL, INSTRUCTION (ENGLISH) (TRV720: US, CND) | | | 3-988-960-01 | BAG (8500), CARRYING (TRV320P/TRV520P) | |
| | 3-059-564-21 | MANUAL, INSTRUCTION (FRENCH) (TRV720: CND) | | | | | |
| | 3-059-564-31 | MANUAL, INSTRUCTION (ENGLISH) (TRV720: E) | | | | | |
| | 3-059-564-41 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV720: E) | | | | | |
| | 3-059-564-51 | MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV720: E) | | | | | |
| | 3-059-564-61 | MANUAL, INSTRUCTION (ARABIC) (TRV720: E) | | | | | |
| | 3-059-564-71 | MANUAL, INSTRUCTION (KOREAN) (TRV720: KR) | | | | | |
| | 3-059-565-11 | MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV720E: AEP) | | | | | |
| | 3-059-565-21 | MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV720E: AEP) | | | | | |
| | 3-059-565-31 | MANUAL, INSTRUCTION (ITALIAN, DUTCH) (TRV720E: AEP) | | | | | |

The components identified by
mark Δ or dotted line with
mark Δ are critical for safety.
Replace only with part num-
ber specified.

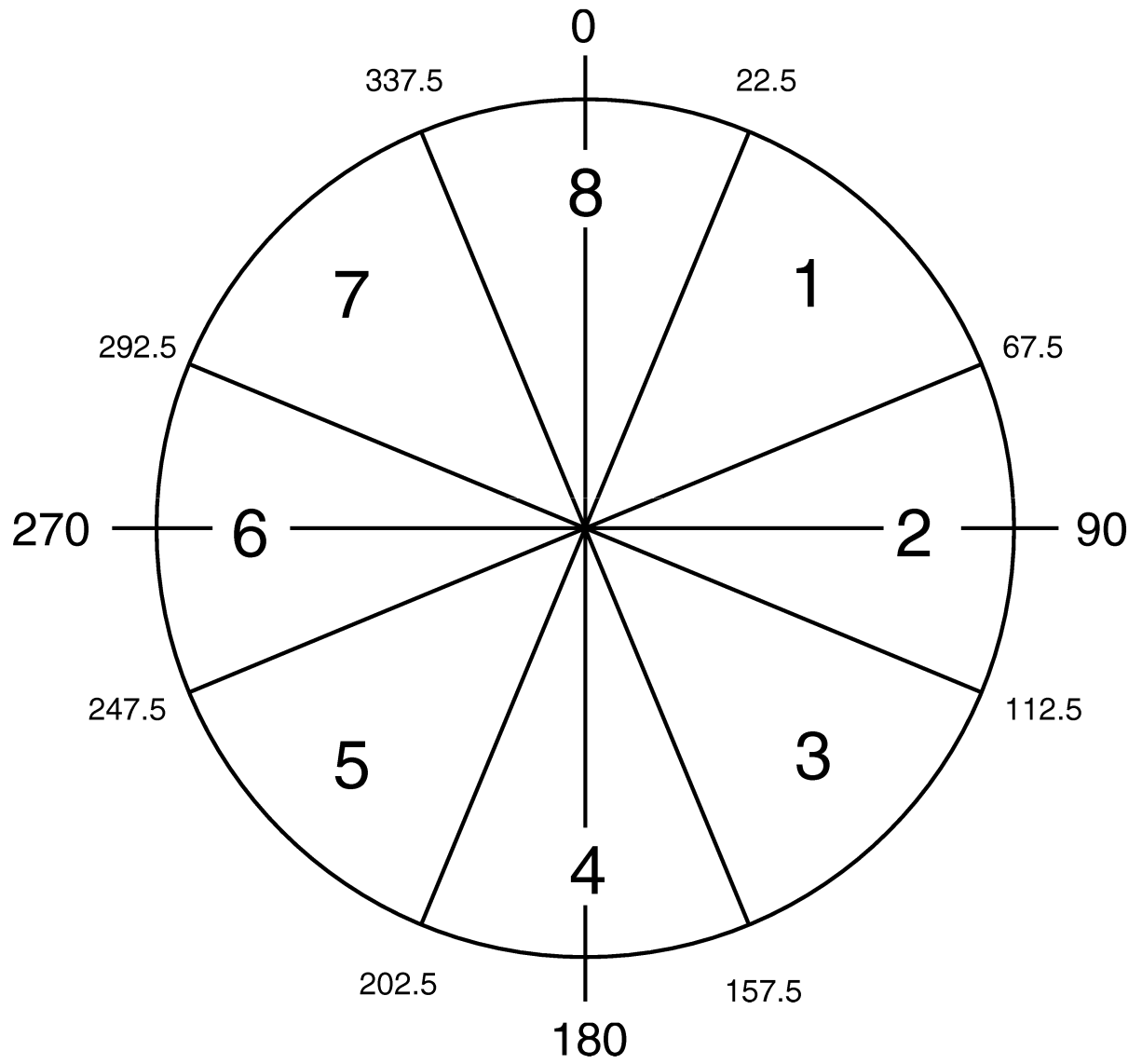
Les composants identifiés par une
marque Δ sont critiques pour la
sécurité.
Ne les remplacer que par une pièce
portant le numéro spécifié.

| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Remark</u> |
|-----------------|-----------------|---|---------------|
| △ | A-7094-140-A | BATTERY PACK (NP-F330) (TRV320: US, CND/TRV520: US/TRV525/ RV720: US, CND) | |
| △ | A-7094-141-A | BATTERY PACK (NP-F330) (TRV320: E, HK, KR/TRV320E/TRV320P/ TRV520: E, HK, KR, JE/TRV520E/TRV520P/ TRV620E/TRV720: E, KR/TRV720E) | |

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

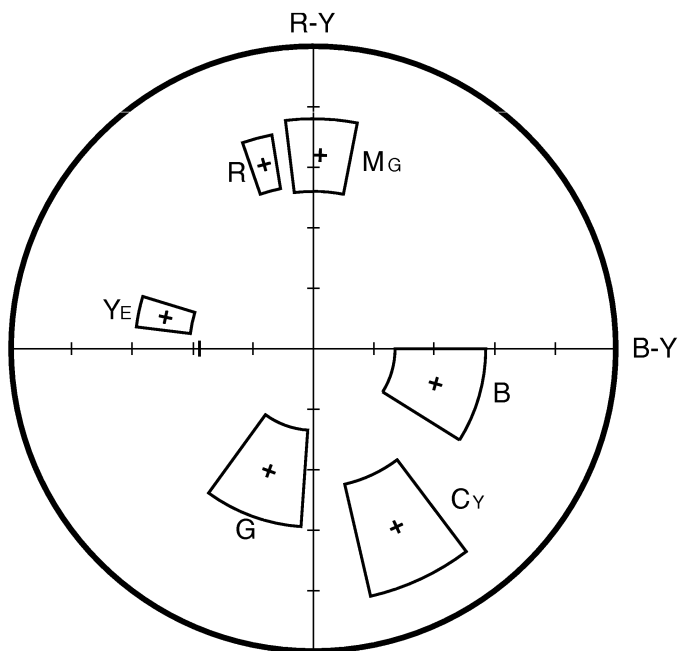
FOR CAMERA OPTICAL AXIS ADJUSTMENT



FOR CAMERA COLOR REPRODUCTION ADJUSTMENT

Take a copy of CAMERA COLOR REPRODUCTION FRAME and Parts reference sheets with a clear sheet for use.

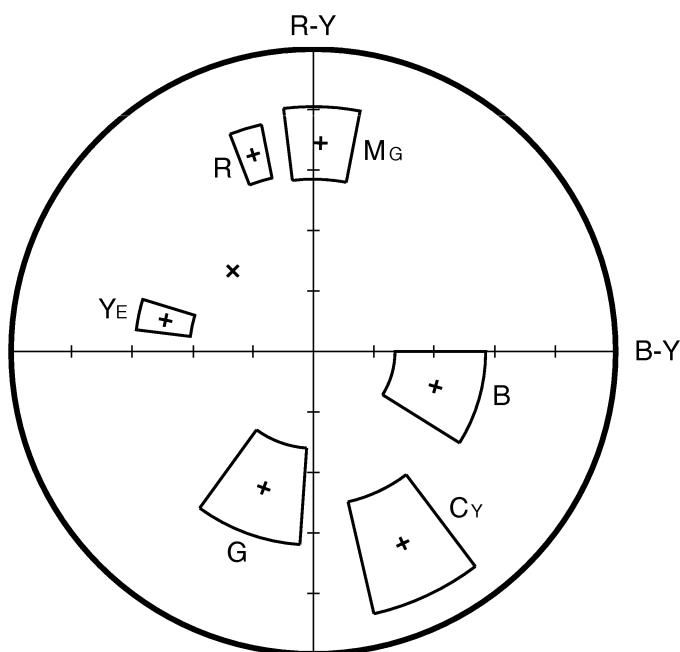
For NTSC 720H model



DCR-TRV320/TRV320P/TRV520/
TRV520P/TRV525/TRV720



For PAL 960H model

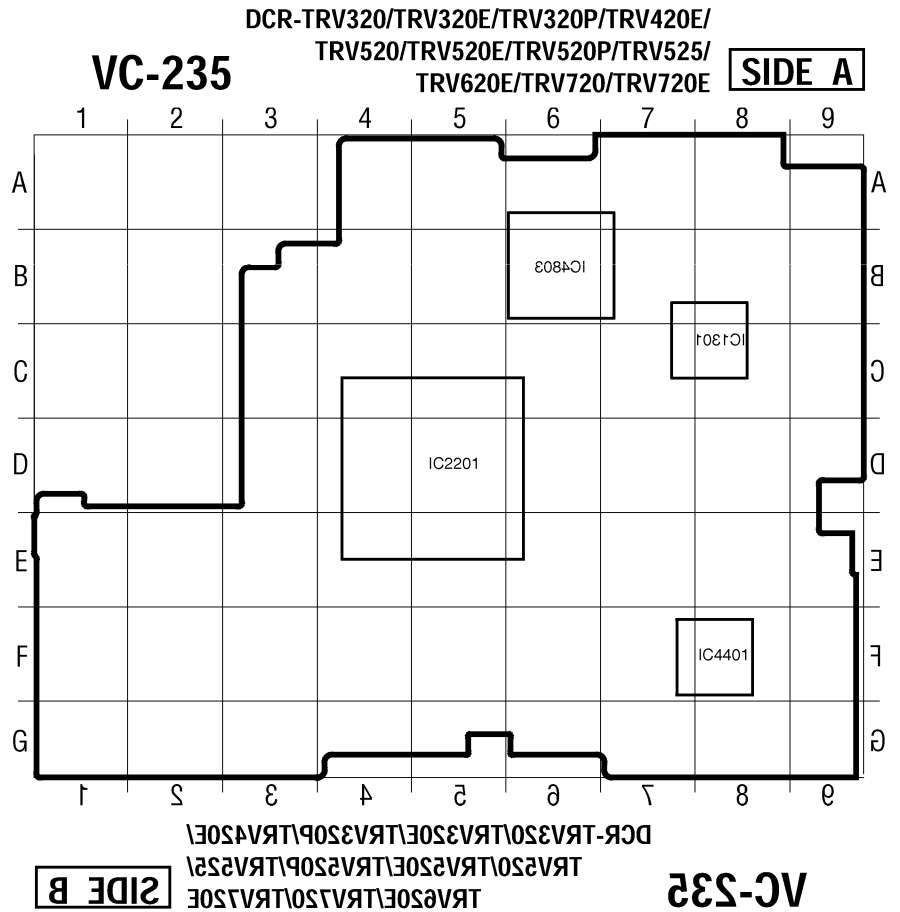


DCR-TRV320E/TRV420E/TRV520E/
TRV620E/TRV720E



< PARTS REFERENCE SHEET >

You can find the parts position of mount locations applying to VC-235 board of a set.

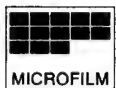
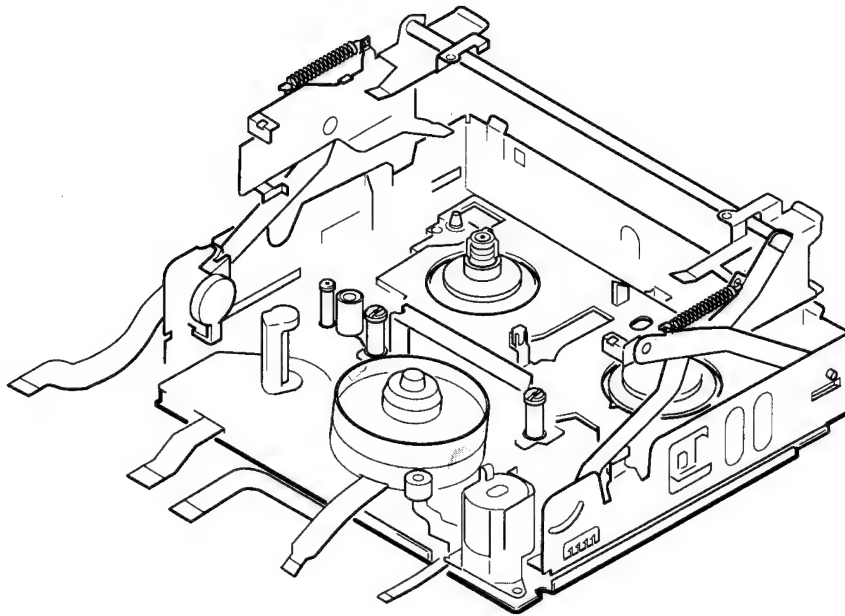


8mm Video MECHANICAL ADJUSTMENT MANUAL VII

B MECHANISM

Video8

Use this mechanical adjustment manual VII together with the service manual of the respective models.



8 MECHANISM DECK
SONY®

TABLE OF CONTENTS

1. PREPARATION FOR CHECKING, ADJUSTING AND REPLACING THE MECHANISM

- 1-1. Cassette Compartment Block Assy 3
- 1-2. How to Operate the Mechanism with the Cassette
Compartment Block Assy Removed 4

2. PERIODIC CHECK AND MAINTENANCE ITEMS

- 2-1. Rotary Drum Assy Cleaning 5
- 2-2. Tape Path Cleaning 5
- 2-3. Periodic Check Items 6
- 2-4. Service Tool List 7

3. CHECKING, ADJUSTING AND REPLACING THE MECHANISM

- 3-1. HC Roller Block Assy 8
- 3-2. Drum Assy 9
- 3-3. Drum Base Block Assy, Shaft Ground 10
- 3-4. Gooseneck Retainer, Gooseneck Gear Assy 11
- 3-5. LS Chassis Block Assy,
Mechanical Chassis Block Assy 12
- 3-6. T Reel Table Assy, T Ratchet,
T Soft Gear Block Assy 15
- 3-7. Tension Regulator Band Assy, TG1 Arm Assy, S Reel
Table Assy, S Ratchet,
S Ratchet Release Plate, RVS Arm 16
- 3-8. Pinch Arm Assy, TG4 Arm Block Assy 17
- 3-9. LS Cam Plate, LS Guide Cover, Lid Opener,
EJ Arm, Lock Guide 18
- 3-10. Guide Base (S) and (T) Block Assemblies,
Guide Rail 19
- 3-11. DC Motor Assy (Loading) 21
- 3-12. Tension Regulator Plate 2, Relay Gear,
M Slider Assy 22
- 3-13. LS Arm, HC Drive Arm, Pinch Press Plate,
Tension Regulator Plate 23
- 3-14. Cam Gear 24
- 3-15. GL Slider Assy, GL Arm 25
- 3-16. Rotary Switch 26
- 3-17. Capstan Motor 27
- 3-18. Tension Regulator Position Adjustment 28
- 3-19. FWD Tape Hold -Back Tension Adjustment 29

4. TAPE PATH ADJUSTMENT

- 4-1. Preparations for Adjustment 30
- 4-2. Tracking Adjustment 31
- 4-3. No. 4 Guide (TG-4) Adjustment 31
- 4-4. CUE, REV Waveforms Check 32
- 4-5. Checks After Adjustments 32

5. EXPLODED VIEWS

- 5-1. Cassette Compartment Block Section 34
- 5-2. LS Chassis Block Section 35
- 5-3. Mechanism Chassis Block Section 36

6. PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM 37

7. ELECTRICAL PARTS LIST 38

For the mode selector operation, schematic diagram
and parts list, refer to the Supplement-1 Manual.

1. PREPARATION FOR CHECKING, ADJUSTING AND REPLACING THE MECHANISM

For the disassembly procedures of the cabinet and printed wiring boards, please refer to the "DISASSEMBLY" section of the service manual of the respective models.

To re-assemble the mechanical parts which are disassembled in the following sections, perform the disassembly steps in reverse, unless otherwise specified.

The mechanisms are adjusted while set in the USE mode of operation. (Refer to the "Mode Selector Operation Procedure of the Supplement-1 Manual for how to enter the USE mode.)

1-1. Cassette Compartment Block Assy

1. Disassembly Procedure (Refer to Fig. 1.)

- 1) Set the mechanism to USE mode.
- 2) Confirm that the Cassette Compartment Block Assy is opened. If it is not opened, open it referring to Fig. a.
- 3) Remove the claws (A) and (B) of the Damper Assy (1) from the chassis.
- 4) Remove the washer (2) from the shaft of the Cassette Compartment near the Drum, next to the loading motor. Remove the shaft of the arm from the slot.

- 5) Remove the shaft of the arm from the slot (C) of the Cassette Compartment near the Drum, next to the capstan motor. (Refer to Fig. b)
- 6) Lift up the Cassette Compartment at the Drum side in the direction of the arrow (D), and remove the arm shaft of the Cassette Compartment from the LS Chassis (4) near the Reel Tables. Remove the Cassette Compartment Assy (3) in the direction of the arrow (E).

2. Precautions During Re-Assembling

- 1) After attaching the Tension Spring, confirm that the straight portion at the end of the curved hook of the spring is positioned inside the mechanism. (Refer to Fig. c)
- 2) Confirm that the claw in the bottom of the shaft near the Reel Table of the Cassette Compartment is hooked to the LS Chassis.
- 3) Confirm that the claw of the Damper Assy is hooked to the LS Chassis. (Refer to Fig. b)

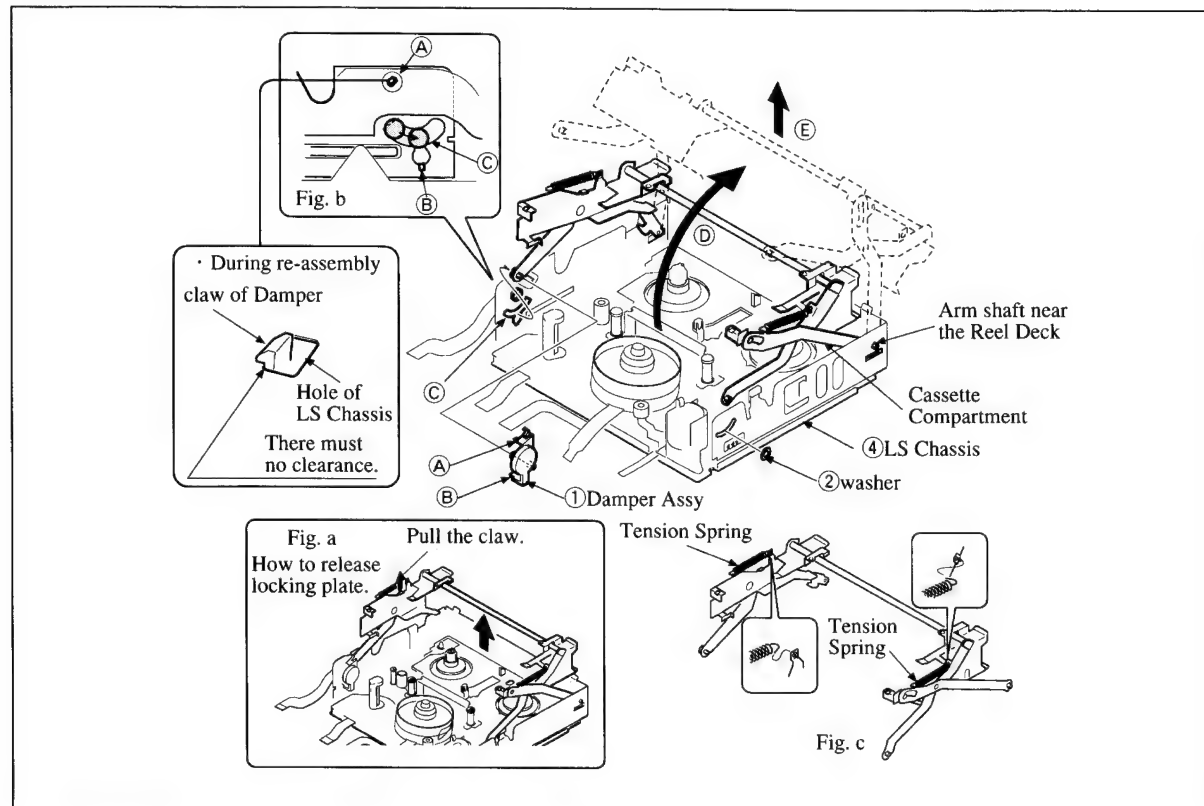


Fig. 1

1-2. How to Operate the Mechanism with the Cassette Compartment Block Assy Removed

1. How to load a cassette tape (Refer to Fig. 2):

- 1) While referring to section "DISASSEMBLY" of the respective service manual, turn the main power on with the cabinet and camera section removed. (It enables to operate the mechanical deck.)
- 2) Connect the adjustment remote commander (Ref. No. J-10) and establish the TEST mode.

Example of establishing the TEST mode: model CCD-TR420E/TR440E.

Select page: 6, address: 00, set data :01 and press the PAUSE button to release protection.

Select page: 7, address: 01, set data: 01 and press the PAUSE button.

After tape loading or other desired operations of mechanism are completed, be sure to perform the following:

Select page: F, address: 01, set data :00 and press the PAUSE button.

Select page: 6, address: 00, set data: 00 and press the PAUSE button.

- 3) Press the push-switch ① knob in the direction of the arrow which sets the machine into loading mode.

☆ PB, FF/REW and CUE/REV operations are possible.

2. How to establish RECORD mode:

- 1) Press pin of the push-switch ② (ON state) and keep the ON state by fixing with adhesive tape ③.
- 2) Turn the main power switch ON (select VTR or CAMERA position of in case of camera).
- 3) Set the RECORD switch to ON.
(When the TEST mode is selected, the rotation detection of the S and T reel tables is muted, and the top end sensor is disable which allow to run the tape.)

3. How to eject a cassette tape:

- 1) Press the EJECT switch to ON.

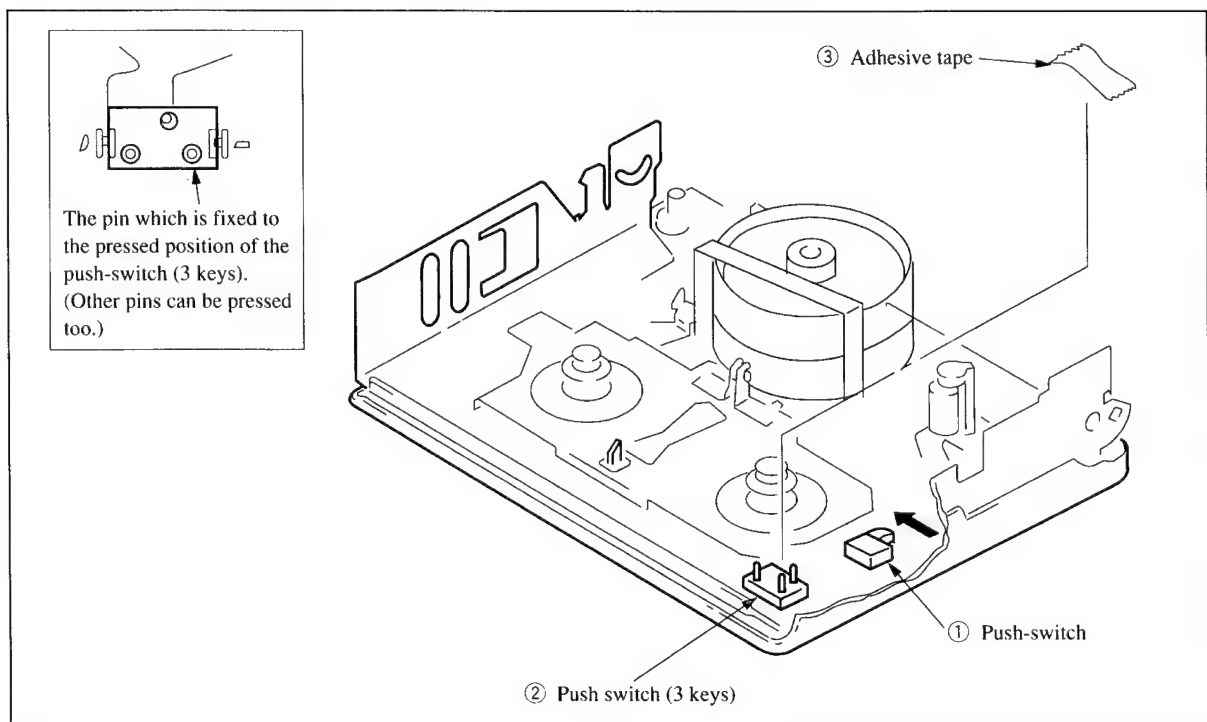


Fig. 2

2. PERIODIC CHECK AND MAINTENANCE ITEMS

- Perform the following periodic check and maintenance to ensure that the machine functions continue to operate in peak condition, and to protect the tape and mechanism deck. After completing repair work, perform the following maintenance items regardless of how long the user's machine has been used.

2-1. Rotary Drum Assy Cleaning

Press the cleaning piece (Ref. No. J-2) moistened with cleaning fluid (Ref. No. J-1) lightly on the Rotary Drum Assy. Gently turn the Rotary Drum Assy slowly by hand counter-clockwise to clean the rotary drum.

Caution: Never attempt to turn the head drum motor by turning the main power ON. Also, never turn the drum clockwise by hand. In addition, never move the cleaning piece vertically with respect to the head tips, since this will damage them. Never clean the head drum in any way other than as described above.

2-2. Tape Path Cleaning (Refer to Fig. 3.)

- 1) Set the mechanism to **USE** mode. Clean the tape path system (TG-1, TG-2, TG-3, TG-4, pinch roller, capstan shaft) and lower drum using a very thin cotton swab (Ref. No. J-3) moistened with cleaning fluid.

Caution: Take care that the very thin cotton swab (Ref. No. J-3) does not touch the oil or grease of the various link mechanisms.

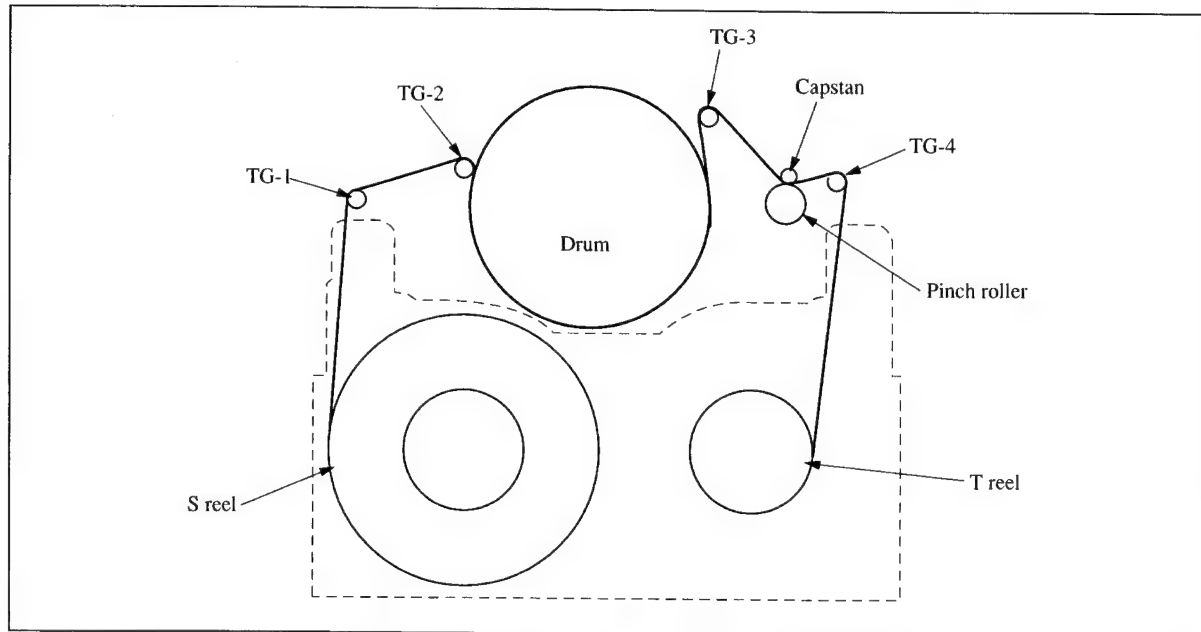


Fig. 3

2-3. Periodic Check Items

| Maintenance and Inspection Points | | Operating Hours | | | | | | | | | | Remarks |
|-----------------------------------|---|-----------------|------|------|------|------|------|------|------|------|------|--|
| | | 500 | 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | |
| Drive System | Cleaning of tape running surface | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Take care not to get oily. |
| | Cleaning and degaussing of Rotary Drum Assy | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Take care not to get oily. |
| | Timing Belt | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | 3-965-546-01 |
| | Capstan Shaft | — | ◎ | — | ◎ | — | ◎ | — | ◎ | — | ◎ | Take great care not to let any oil contact the tape running surface. |
| | Change Gear Shaft | — | ◎ | — | ◎ | — | ◎ | — | ◎ | — | ◎ | |
| | Relay Pulley Shaft | — | ◎ | — | ◎ | — | ◎ | — | ◎ | — | ◎ | |
| Performance Check | Loading Motor | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | X-3945-401-1 |
| | Abnormal Sound | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Tape Hold-back Tension Measurement | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | |
| | Brake System | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | |
| | FWD } Torque RVS } Measurement | — | ☆ | — | ☆ | — | ☆ | — | ☆ | — | ☆ | |

○Cleaning ◎Lubrication ☆Check

Note: When overhauling the machine, replace the parts while referring to the above table.

Note: Regarding oil

- Be sure to use the specified oil. (If the viscosity and other characteristics are different, various troubles may arise.)

Oil: Sony part No. 7-661-018-18

(Mitsubishi diamond oil hydro fluid NT-68)

- For the oil lubricated bearings, use oil free from dust or foreign materials. If the oil contains any dust or foreign material, the bearings will wear out quickly or burn out.
- One drop of oil is the amount of oil which forms at the tip of a stick of 2 mm diameter.

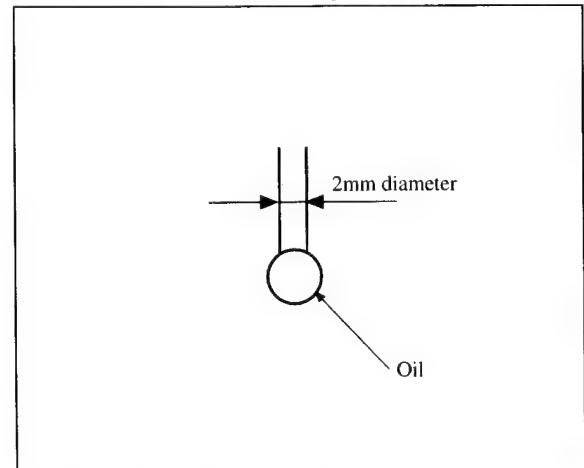



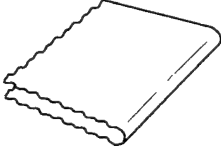


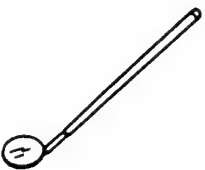
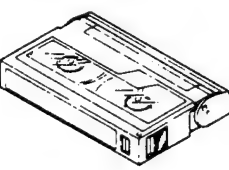
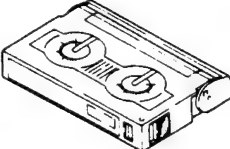
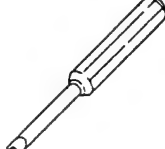


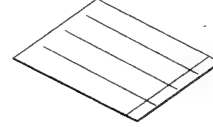


Fig. 4

2-4. Service Tool List

| Ref. No. | Name | Parts Code | Tool Stamp | Applications |
|----------|---|------------------------------|------------|-------------------------------|
| J-1 | Cleaning fluid | Y-2031-001-0 | — | |
| J-2 | Cleaning piece | 2-034-697-00 | — | |
| J-3 | Very thin cotton swab (made by Nippon Cotton Swab Inc. (P752D)) | | — | |
| J-4 | Head demagnetizer | Commercially available | — | |
| J-5 | Dental mirror Spare mirror | J-6080-029-A J-6080-030-1 | SL-5052 | Tape path |
| J-6 | Alignment tape (NTSC : WR5-1NP) (PAL : WR5-1CP) | 8-967-995-02 8-967-995-07 | — | Tape path |
| J-7 | FWD/RVS take-up torque cassette | J-6080-824A | GD-2086 | |
| J-8 | Screwdriver for tape path adjustment | J-6082-026-A | — | For tape guide adjustment |
| J-9 | FWD/BACK tension adjustment screwdriver | J-6082-187-A | — | |
| J-10 | Remote commander for adjustment | J-6082-053-B | — | Tape path (Setting PATH mode) |
| J-11 | MD process table | J-6082-166-A | — | |
| J-12 | FLOIL Grease SG-941 | 7-662-001-39 | — | |
| J-13 | FLOIL Grease SG-055G | 7-651-000-09 | — | |

Other equipment

- Oscilloscope
- Analog circuit tester (input impedance 20 kΩ)

| | | | |
|---|---|--|---|
| J-1  | J-2  | J-3  | J-4  |
| J-5  | J-6  | J-7  | J-8  |
| J-9  | J-10  | J-11  | J-12  |
| J-13  | | | |

3. CHECKING, ADJUSTING AND REPLACING THE MECHANISM

3-1. HC Roller Block Assy (Refer to Fig. 5)

1. Disassembly Procedure

- 1) Remove the Torsion Spring ① from the cut-out ①A of the motor holder. Hook it to the claw ①B of the HC Arm.
- 2) Remove the HC Roller Block Assy in the direction shown by ①C.
- 3) Remove the stop washer ② and remove the HC Roller Block Assy ③.

2. Precautions During Re-Assembly

- 1) After attaching the HC Roller Block Assy, confirm that both ends of the torsion spring are hooked to ①A and ①D.
- 2) Align the block so that the cut-out ①E agrees with the rib ①F.

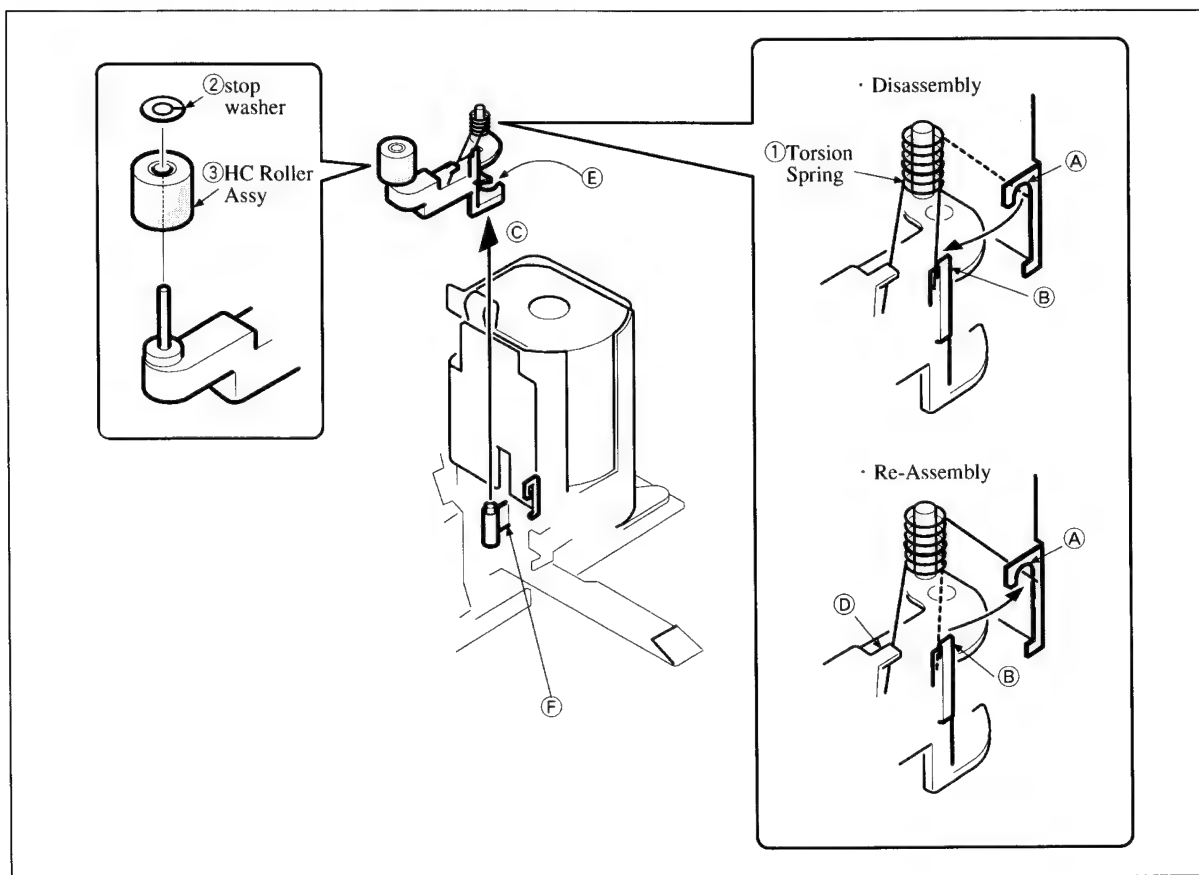


Fig. 5

3-2. Drum Assy (Refer to Fig. 6)

1. Disassembly Procedure

- 1) Set the mechanism to **USE** mode.
- 2) Remove the three screws (M 1.4) ① and remove the Drum Assy ②.

Caution: Be careful not to touch the outer circumference of the drum. (Hold the portions **A** and **B** of the drum assy.)

2. Precautions During Re-Assembly

- 1) Be careful not to touch the outer circumference of the drum. (Hold the portions **A** and **B** of the drum assy.)
- 2) When tightening the three screws (M 1.4), tighten them in the order **C**, then **D**, then **E**.
- 3) After attaching the Drum Assy, perform the steps in section "4. TAPE PATH ADJUSTMENT".

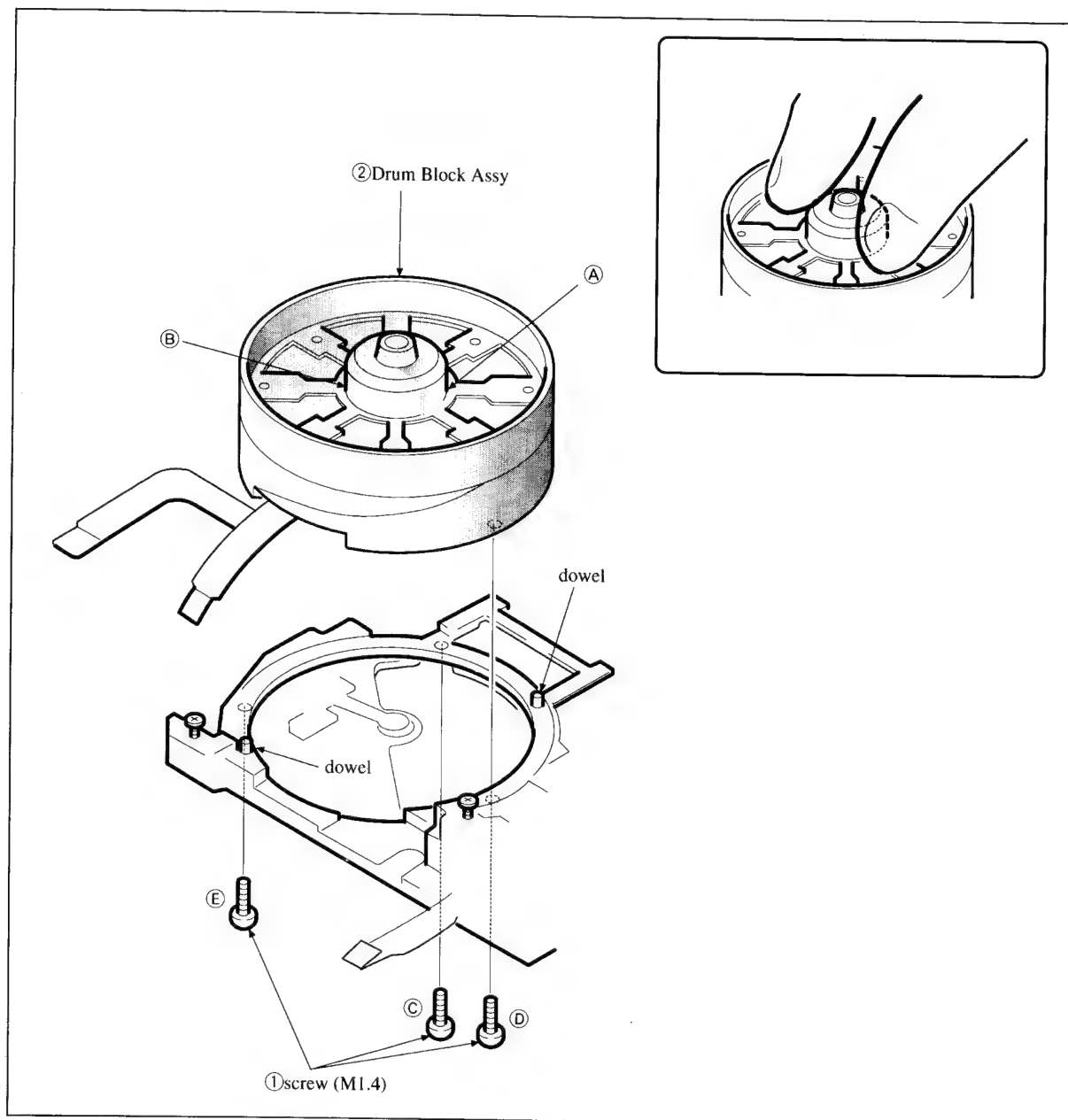


Fig. 6

3-3. Drum Base Block Assy, Shaft Ground (Refer to Fig. 7)

1. Disassembly Procedure

- 1) Remove the Drum Assy referring to section 3-2.
- 2) Remove the three screws (M 1.4×2.5) ① and remove the Drum Base Block Assy ②.
- 3) Remove the screw (M 1.7×1.4) ③ and remove the Shaft Ground ④.

2. Precautions During Re-Assembly

- 1) Do not touch the spring portion of the Shaft Ground ④.
- 2) When tightening the three screws (M 1.4×2.5), tighten them in the order of ①, then ②, then ③.
- 3) After re-assembly is completed, perform the steps in section "4. TAPE PATH ADJUSTMENT".

Caution 1: Do not hold the spring portion of the Shaft Ground ④.

Caution 2: The loading motor can be removed while the mechanism is in this state. However, do not move any other mechanical parts (especially gears and cams around the rotary switch) when removing the loading motor. (Refer to 3-11.)

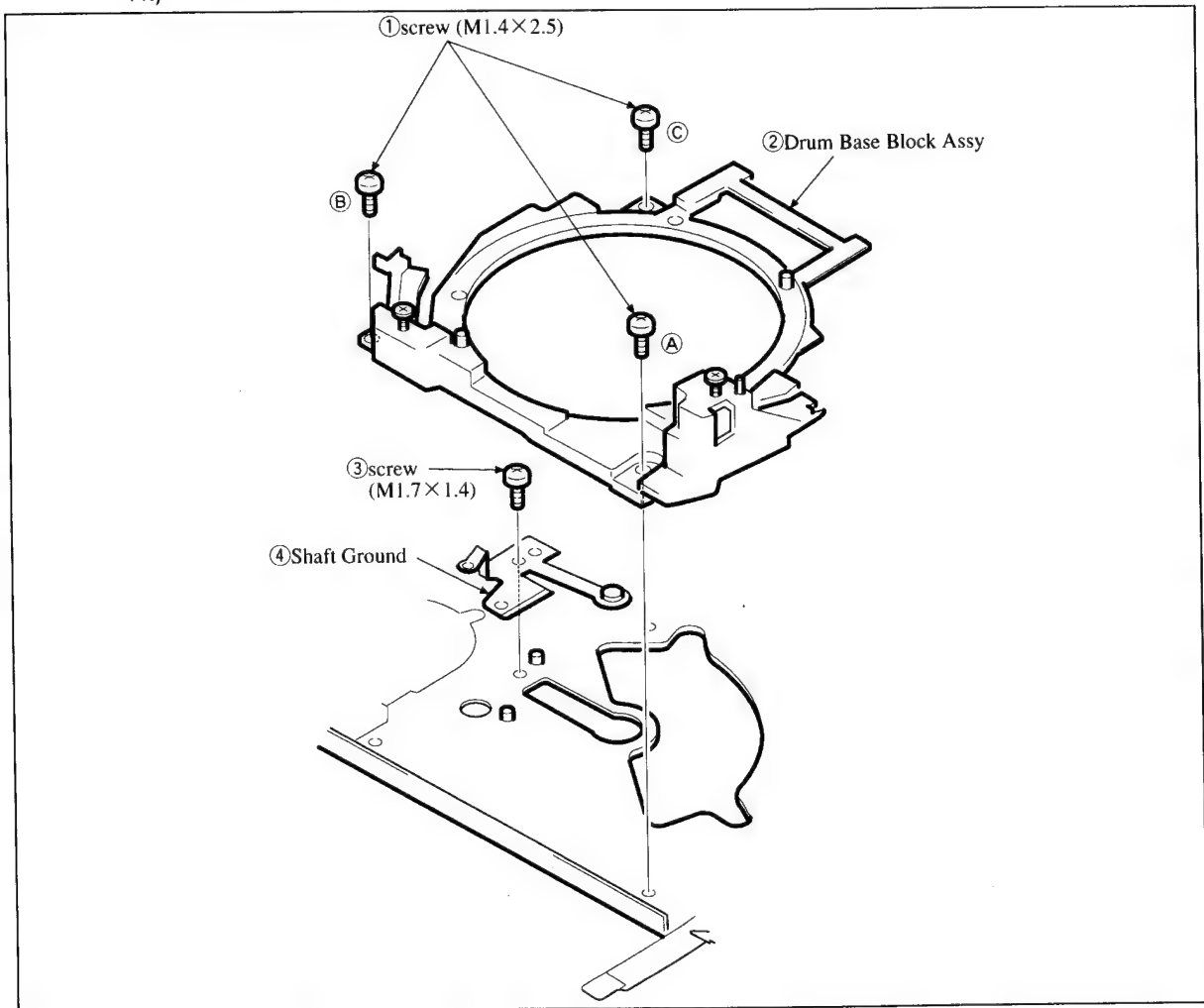


Fig. 7

3-4. Gooseneck Retainer, Gooseneck Gear Assy (Refer to Fig. 8)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the LED ① from the LED holder of the Gooseneck Retainer ③.
(Turn the flexible board 90° outside and remove it upward.)
- 3) Remove the three screws (M 1.4×2.5) ② and remove the Gooseneck Retainer ③.
- 4) Remove the stop washer ④ and remove the Gooseneck Gear Assy ⑤.

2. Precautions During Re-Assembly

- 1) When attaching the Gooseneck Retainer ③, take care that the Gooseneck Retainer ③ does not collide with the tension regulator band. (The tension regulator band must be located inside.)
- 2) Hook the T-side claw on the guide.

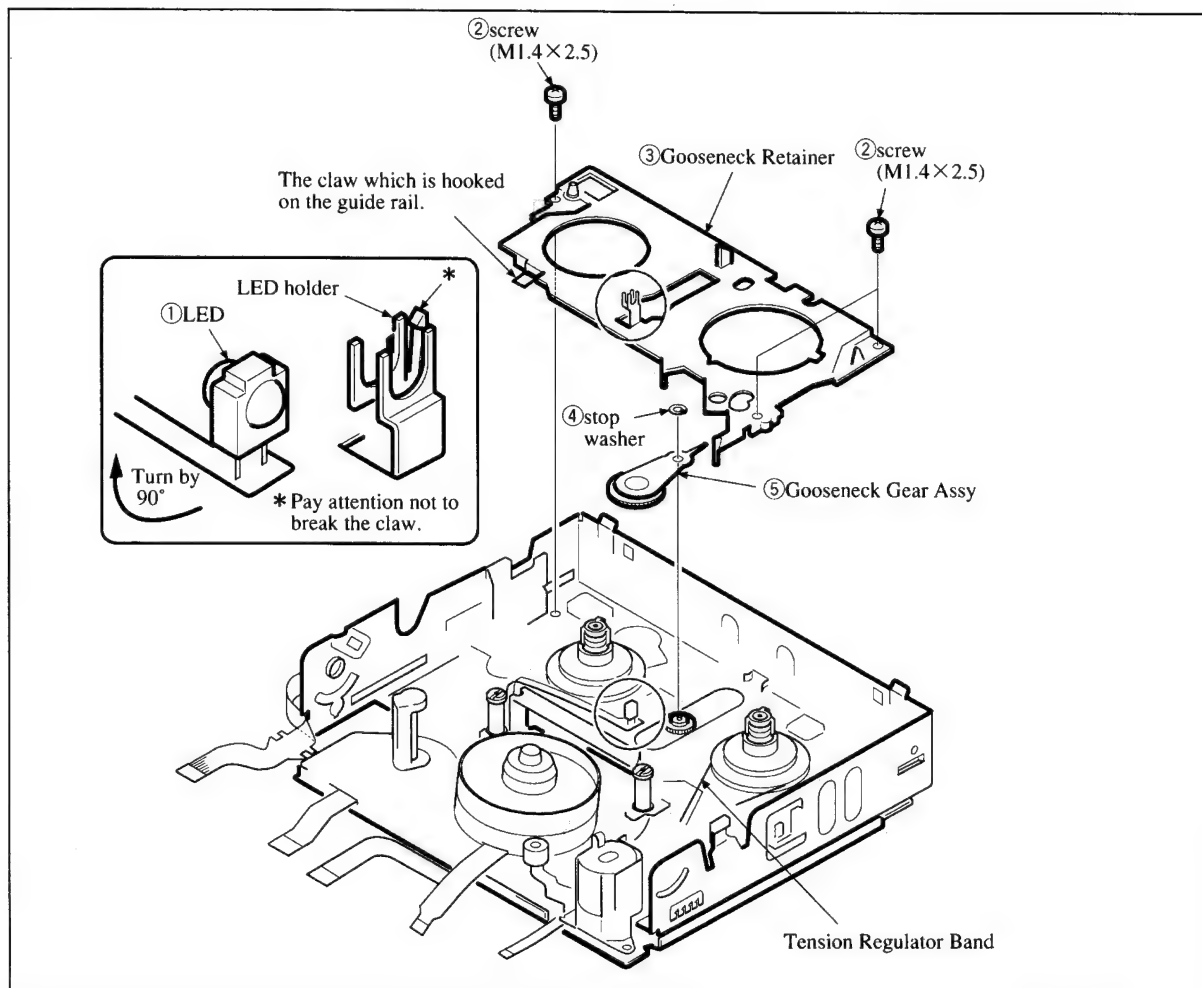


Fig. 8

3-5. LS Chassis Block Assy, Mechanical Chassis Block Assy (Refer to Fig. 9)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 3) Remove the FP-221 flexible board ① from the flexible board holder.
- 4) Remove the stop ring E1.5 ②.
- 5) Remove the two screws (M 1.4×2.5) ③ and remove the LS Chassis Block Assy ④ from the Mechanical Chassis Block ⑤ in the direction of the arrow A.

Note: The Tension Regulator Plate (2) can easily fall into the Mechanical Chassis Block Assy. Take care not to drop it.

2. Precautions During Re-Assembly

- 1) Before attaching the LS Chassis Block Assy, confirm that the respective phase-determining holes have been adjusted for correct phase. Also confirm that the specified locations of the Mechanical Chassis Block Assy and the LS Chassis Block Assy are coated with grease SG-055G (Ref. No. J-13). (Refer to Fig. a)
- 2) When attaching the LS Chassis Block Assy, insert the LS Cam Plate (on the LS chassis side) into the dowel (on the mechanical chassis side). Also insert the TG1 Cam Axis (on the LS chassis side) into the Tension Regulator Plate (2) (on the mechanical chassis side).
- 3) When attaching these block assemblies, attach them while pressing the TG-1 Arm Assy in the direction toward the TG-2 Guide. (Refer to Fig. b)
- 4) Pay attention that the TG-1 Arm is not floated.

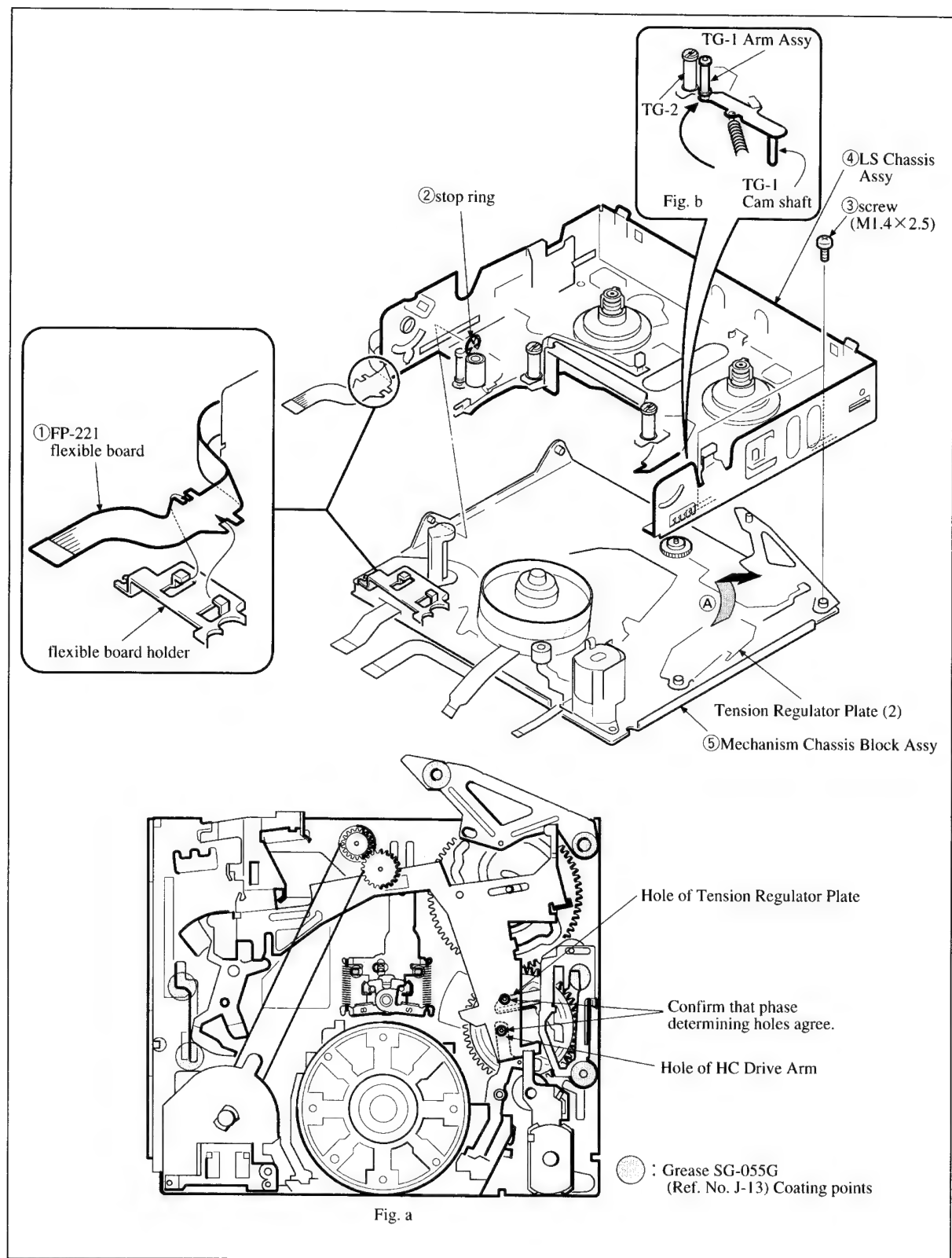


Fig. 9

• PARTS CONSTITUTING THE LS CHASSIS.

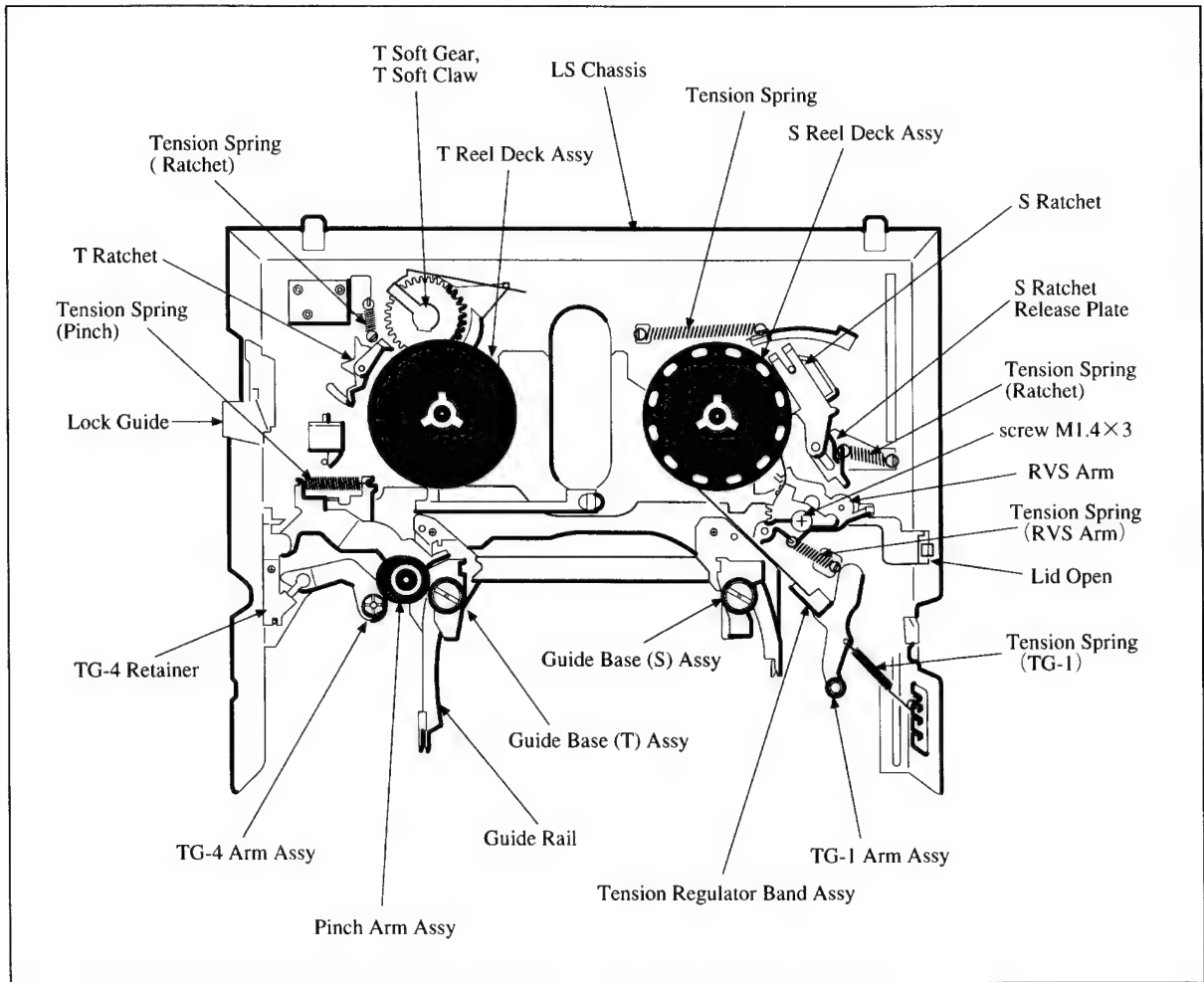


Fig. 10

3-6. T Reel Table Assy, T Ratchet, T Soft Gear Block Assy (Refer to Fig. 11)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 3) Remove the claw of the T Reel Deck Assy ① from the chassis and remove the T Reel Deck Assy from its shaft.
- 4) Remove the Tension Spring (Ratchet) ② from the LS Chassis and turn the T Ratchet ③ in the direction of the arrow (A) and remove it.
- 5) Turn the T Soft Gear Block Assy ④ in the direction of the arrow (B) and remove it.

2. Precautions During Re-Assembly

- 1) Confirm that the protrusions of both the T Soft Gear Block Assy and T Ratchet are securely locked to the LS Chassis.
- 2) Be careful not to deform the claw.

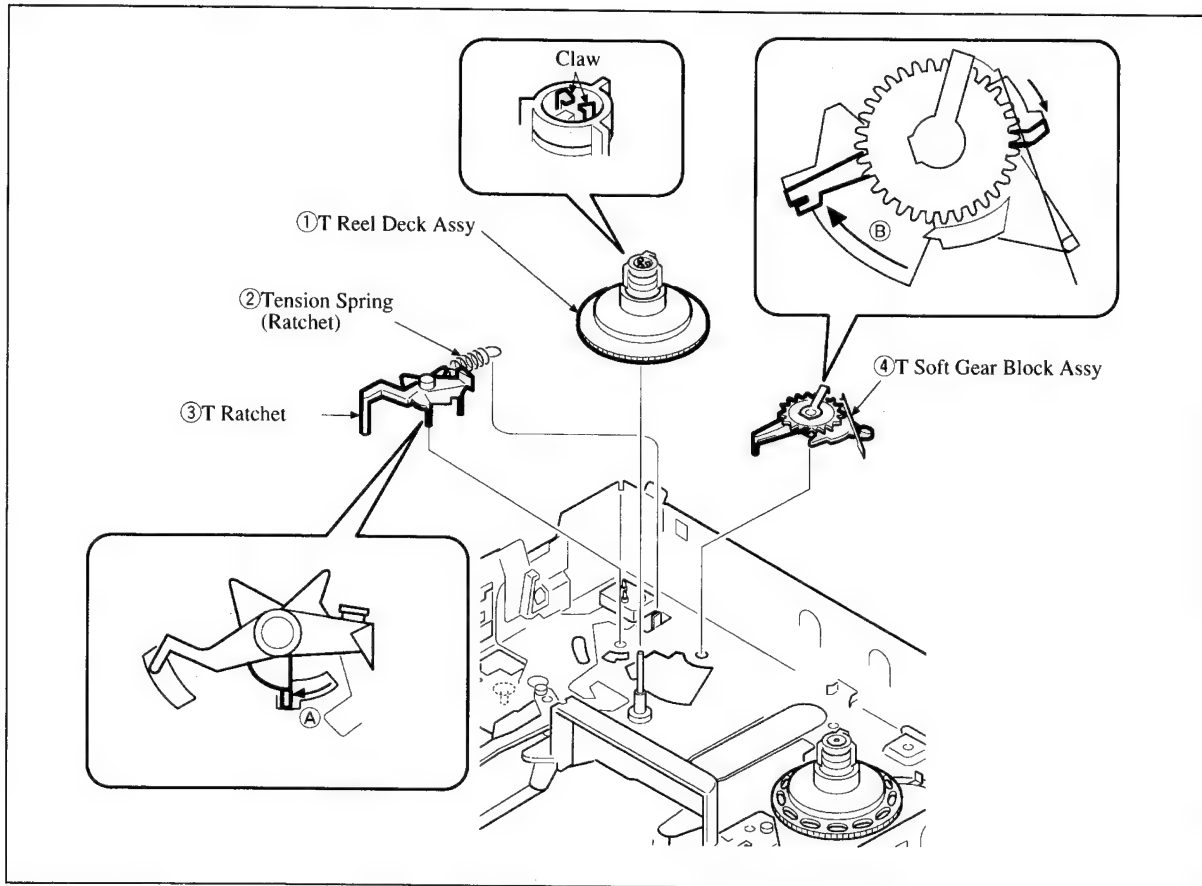


Fig. 11

3-7. Tension Regulator Band Assy, TG1 Arm Assy, S Reel Table Assy, S Ratchet, S Ratchet Release Plate, RVS Arm (Refer to Fig. 12)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 3) Remove the Tension Spring (TG1) ① from the LS Chassis.
- 4) Remove the screw (M 1.4×3) ② and remove the Tension Adjustment Block of the Tension Regulator Band Assy ④ from RVS Arm.
- 5) Release the S Ratchet ⑥ in the direction of the arrow (A) and remove the Tension Regulator Band (while taking care not to bend the band) from the S Reel.
- 6) Remove the TG1 Arm Assy ③ from the LS Chassis, then remove the claw of the Tension Regulator Band Assy ④. (Refer to Fig. a)
- 7) Remove the claw of the S Reel Deck Assy ⑤ from the chassis and remove the S Reel Deck Assy from its shaft.
- 8) Remove the S Ratchet ⑥. (Because it is press-fitted, insert tip of screwdriver into the center of rotation and remove it.)
- 9) Remove the Tension Spring (ratchet) ⑦ from the LS Chassis and remove the S Ratchet Release Plate ⑧.
- 10) Remove the Tension Spring ⑨ from the LS Chassis and remove the RVS Arm ⑩ by turning it..

2. Precautions During Re-Assembly

- 1) Confirm that the dowel of the S Ratchet Release Plate is inserted into the groove of the S ratchet and confirm that the center of the ratchet is press-fitted into bottom of the shaft. (It can be used again.)
- 2) When attaching the Tension Regulator Band Assy, take care not to bend it.
- 3) Pay attention that oil or grease is not spit on the surface of the Tension Regulated Band. (Pay attention also not to touch it with hand directly.)
- 4) Confirm that the tension regulator band is correctly inserted into the groove of the S Reel Deck Assy ⑤. (Refer to Fig. b)
- 5) When securing the Tension Adjustment Block using the screw, press it toward the position which gives the least tension, then tighten the fixing screw.
- 6) Before attaching the TG1 Arm Assy, coat the LS Chassis TG1 boss with oil (1/2 drop).
- 7) Do not touch the tape guide of the TG1 Arm Assy with bare hands.
- 8) Confirm that the claw of the S Reel Deck Assy is not deformed.

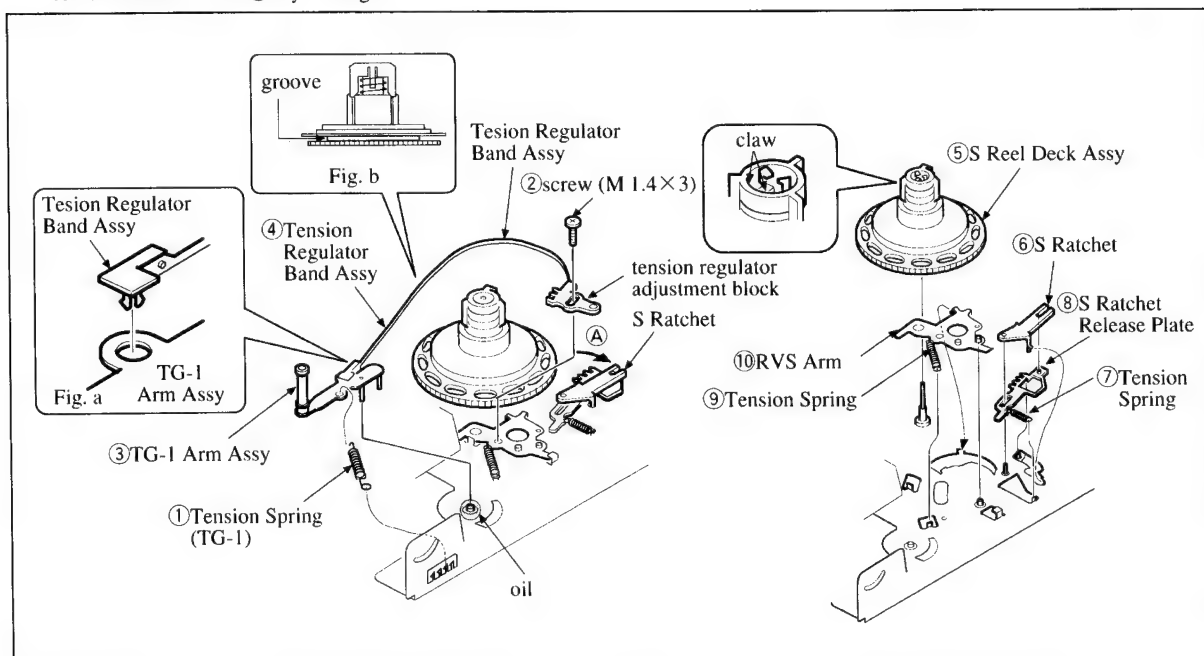


Fig. 12

3-8. Pinch Arm Assy, TG4 Arm Block Assy (Refer to Fig. 13)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 3) Remove the LS Chassis Block Assy referring to section 3-5.
- 4) Remove the Torsion Spring (pinch) ① from an end of Pinch Arm and hook it on the cut-out (A) of the LS Chassis.
- 5) Remove the screw (M 1.4×2.5) ② and remove the TG4 Retainer ③.
- 6) Remove the TG4 Arm Block Assy ④ and remove the Torsion Spring ⑤ while paying attention to the Torsion Spring ⑤.
- 7) Remove the Pinch Arm Assy ⑥. (Caution: The Pinch Press Roller is easy to drop. Pay attention not to drop it.)
- 8) Remove the Torsion Spring (pinch) ① from the cut-out of the LS Chassis in the order of (A) then (B).

2. Precautions During Re-Assembly

- 1) Before attaching these parts, coat the LS chassis pinch arm boss and TG4 arm boss with grease SG-055G (Ref. No. J-13).
- 2) Do not touch the tape guide of the TG4 Arm Block Assy and roller of the Pinch Arm Assy with bare hand.
- 3) After coating the Pinch Press Shaft of the Pinch Arm Assy ③ with grease SG-055G (Ref. No. J-13), attach the Pinch Press Roller.

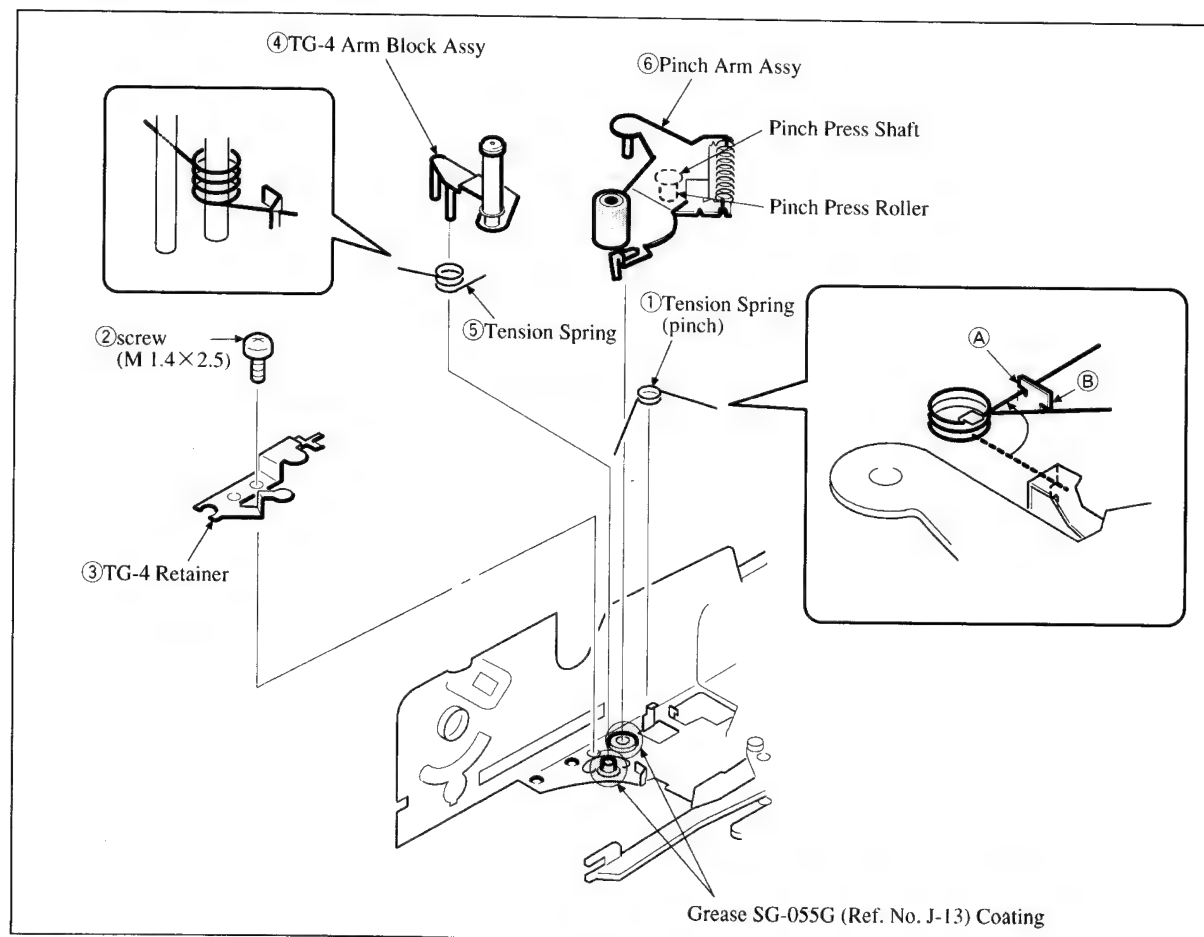


Fig. 13

3-9. LS Cam Plate, LS Guide Cover, Lid Opener, EJ Arm, Lock Guide (Refer to Fig. 14)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 3) Remove the LS Chassis Block Assy referring to section 3-5.
- 4) Remove the two screws (M 1.4×2.5) ① and remove the the LS Cam Plate ②.

In this state, write a mark on the screw ① and on the LS Chassis indicating the position of the LS Cam Plate which helps during re-assembly.

- 5) Remove the LS Guide Cover ③.
- 6) Remove the Lock Guide ④ in the upward direction. (Refer to Fig. a)

- 7) Remove the Lid Open ⑤ in the direction of the arrow ③ while pushing ④ portion.
- 8) Remove the EJ Arm ⑥. (The EJ Arm ⑥ is press-fitted. If the EJ Arm ⑥ is not damaged, it is not necessary to replace.)

2. Precautions During Re-Assembly

- 1) After the captioned parts are attached, confirm that the respective claws and dowels are engaged completely.
- 2) If the EJ Arm ⑥ is removed, be sure to replace it with the new replacement EJ Arm.
- 3) If any mark is not written when removing the LS Cam Plate ②, adjust and attach it as shown in Fig. b.

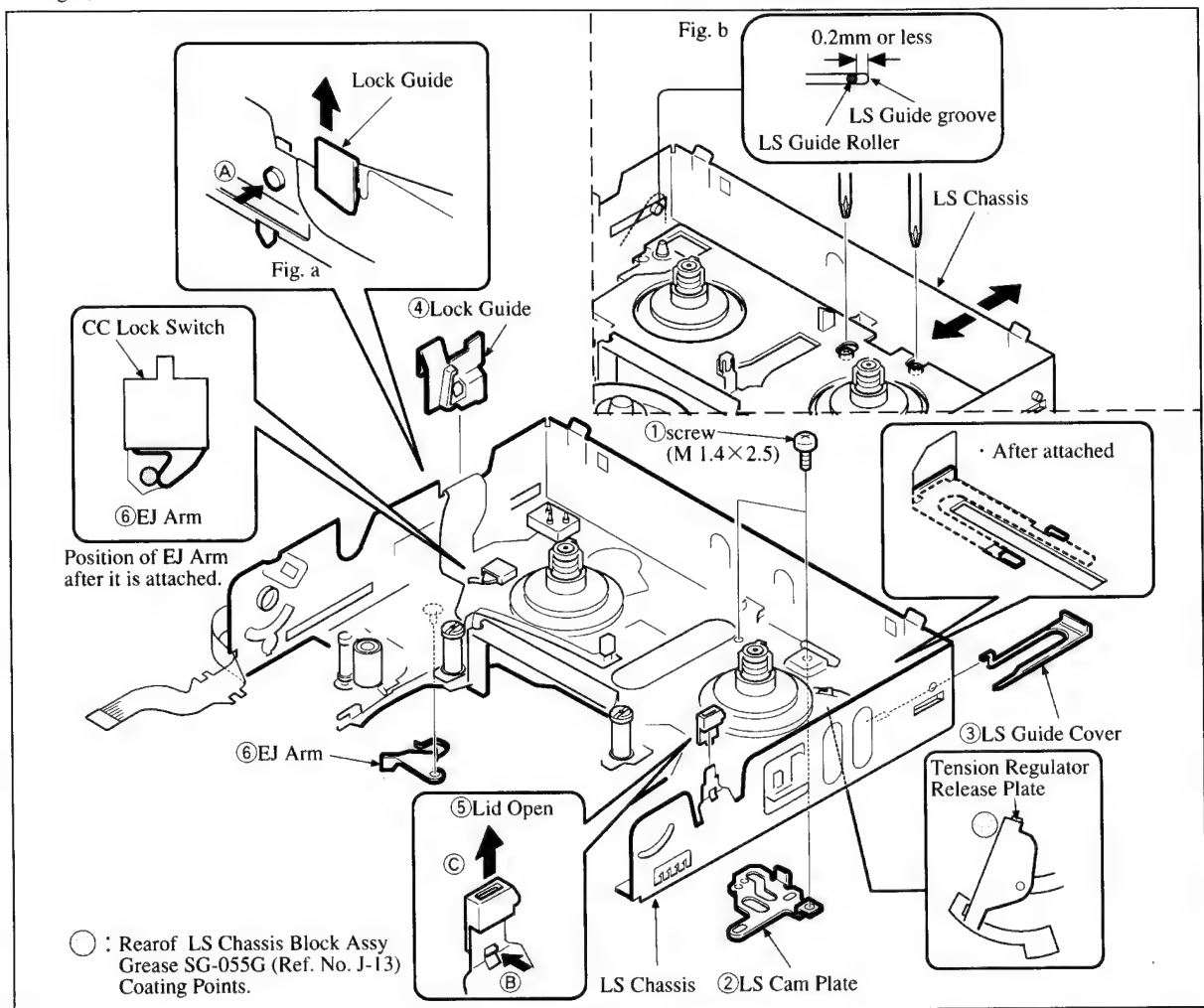


Fig. 14

3-10. Guide Base (S) and (T) Block Assemblies, Guide Rail (Refer to Fig. 15)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 3) Remove the LS Chassis Block Assy referring to section 3-5.
- 4) While pushing the GB Stoppers (S) and (T) in the direction of arrow ①, press the guide arm in the direction of the arrow ②, and turn the Guide Base (S) and (T) Block Assemblies : ① and ② in the direction of the arrow ③ respectively, and remove them.
- 5) Remove the two screws (M 1.4×2.5) ③ and remove the the Guide Rail Assy ④.
- 6) Remove the Stopper (S) and (T) : ⑤ and ⑥, then remove the GB Stopper S and T: ⑦ and ⑧.

2. Precautions During Re-Assembly

- 1) Pay attention not to deform the Guide Rail.
- 2) Do not touch the tape guide of the Guide Base (S) and (T) Block Assemblies with bare hand.
- 3) Pay attention not to deform the Stoppers (S) and (T).
- 4) When attaching the Guide Base (S) and (T) Blocks to the Guide Rail, move back the Guide Bases until the GB Stoppers (S) and (T) are locked. ("Click" sounds.)
- 5) After the captioned parts are attached, perform section "4. TAPE PATH ADJUSTMENT".

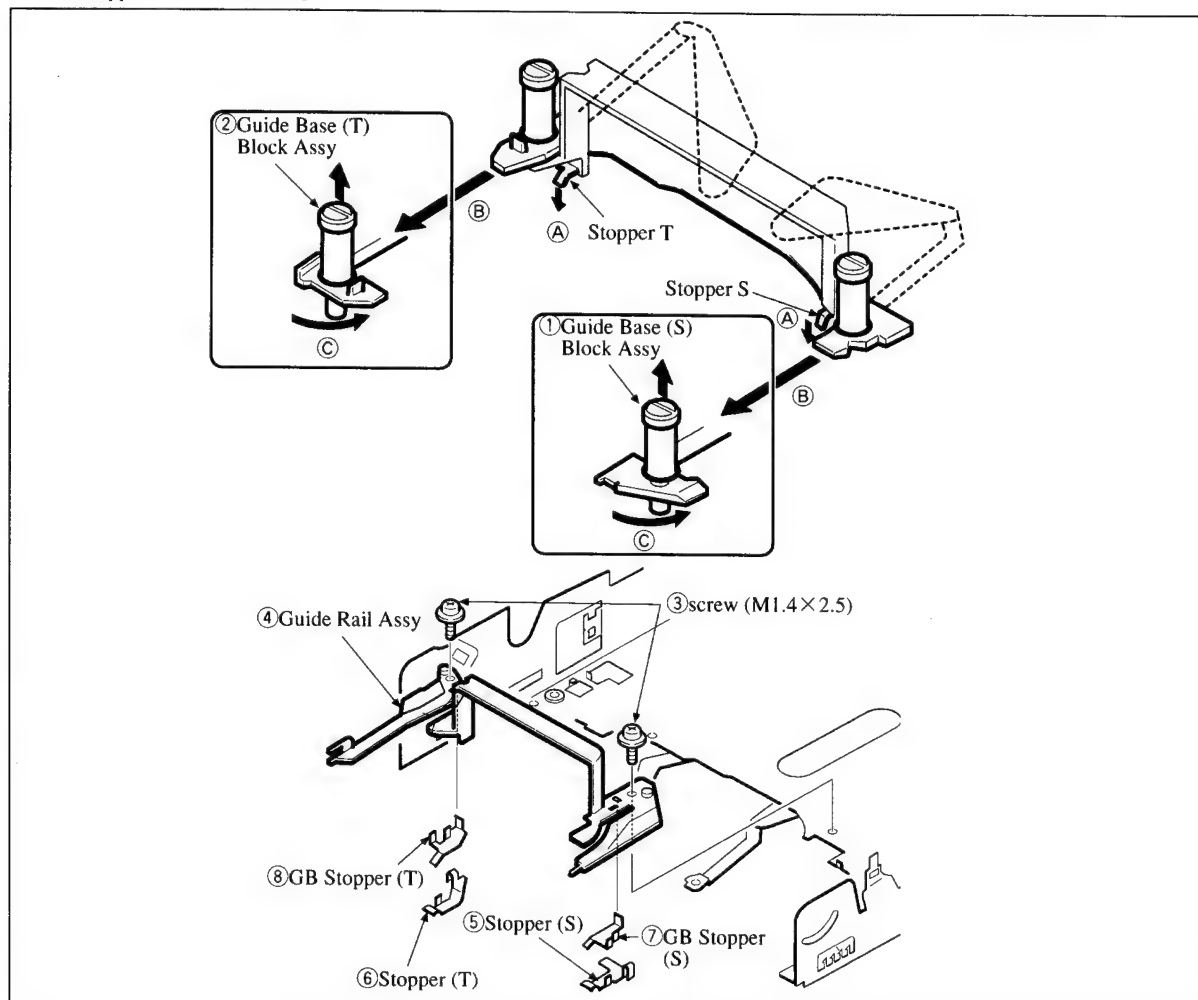


Fig. 15

• PARTS CONSTITUTING THE MECHANISM CHASSIS

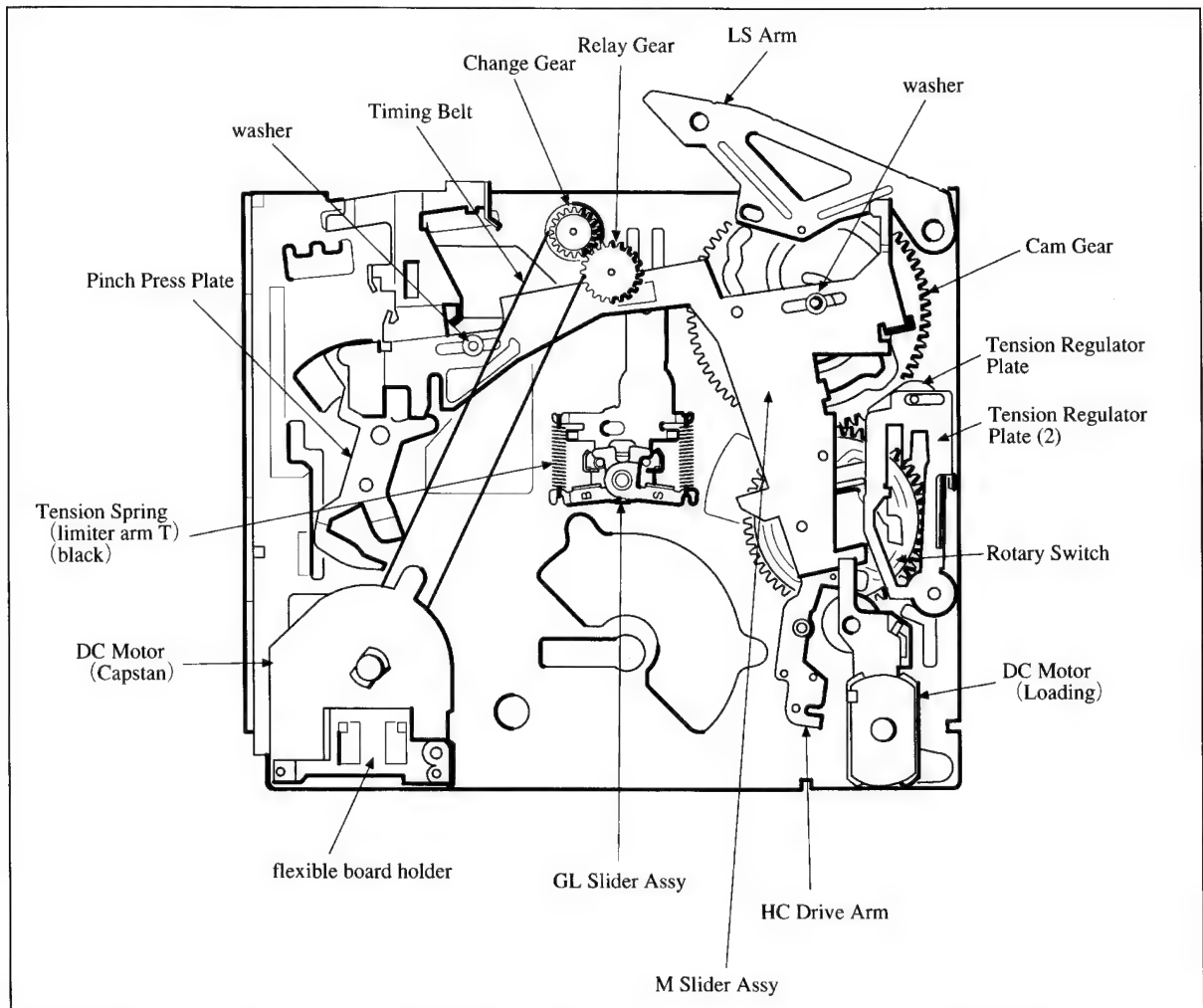


Fig.16

3-11. DC Motor Assy (Loading) (Refer to Fig. 17)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove soldering from the (A) portion.
- 8) Remove the screw (M 1.4×2.5) (1) and remove the Motor Holder Block Assy (2) from the mechanism chassis along with the claw beneath the Motor Holder Block Assy as shown by the arrow (B).
- 9) Remove the Motor Shield (3) in the direction of the arrow (C) (by opening the two ★ star marked points).
- 10) Release the claw on top of the Motor Holder (5) and remove the DC Motor Assy (4) in the direction of the arrow (D).
- 11) Remove the Motor Holder Sleeve (6), Gear A (7) and Worm Shaft (8) in this order.

2. Precautions During Re-Assembly

- 1) Before attaching the Gear A (6), coat the Retainer Shaft (E) with grease SG-055G (Ref. No. J-13).
- 2) After assembling the Motor Holder Block Assy, coat the six locations shown by Fig. a with grease SG-055G (Ref. No. J-13).
- 3) The HC Drive Arm is easy to drop. Confirm that it is attached referring to Fig. 19.

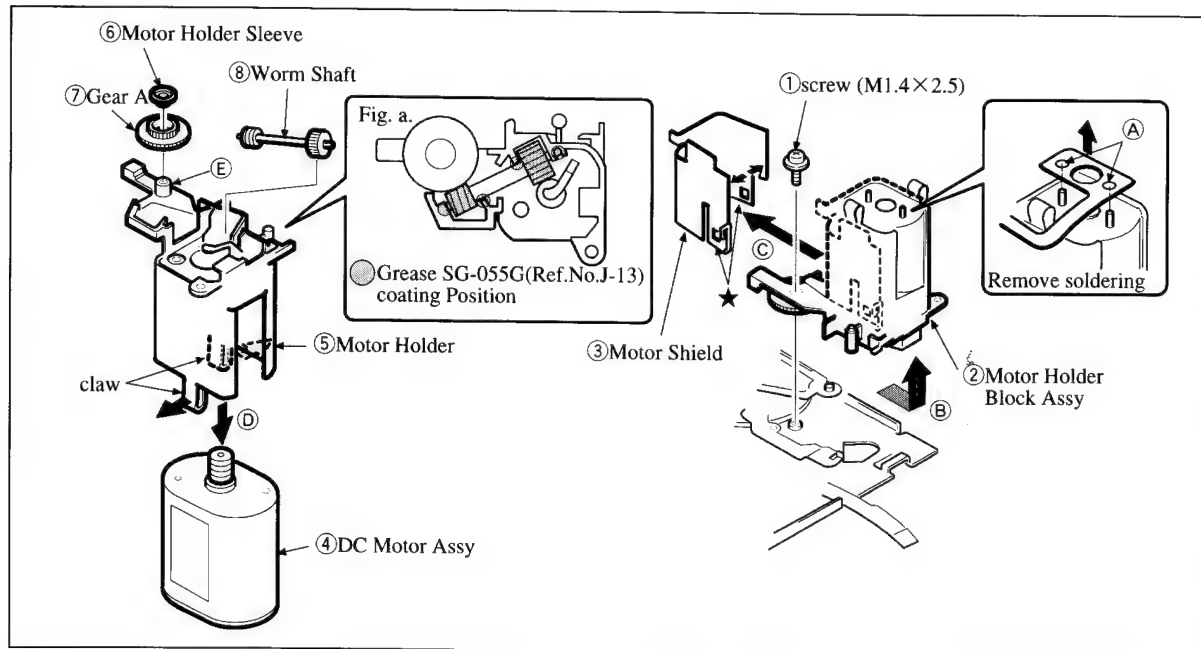


Fig. 17

3-12. Tension Regulator Plate 2, Relay Gear, M Slider Assy (Refer to Fig. 18)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove the DC motor referring to section 3-11.
- 8) Remove the Tension Regulator Plate 2 ①.
- 9) Remove the Relay Gear ②.
- 10) Remove the two washers ③. Remove the M Slider Assy ④.

At the point, confirm that the LS Roller ⑤ is not dropped.

2. Precautions During Re-Assembly

- 1) Before attaching the M Slider Assy ④, coat the LS Roller Shaft ① on the back of the M Slider Assy, the Pinch Press Plate Shaft ② and the mechanism chassis M Slider Axis ③ with grease SG-055G (Ref. No. J-13). (Refer to Fig. b)
- 2) While confirming the phase-determining holes, attach the M Slider Assy ④ while paying attention to the claw.
- 3) Attach the Tension Regulator Plate 2 ① inside the Tension Regulator Plate. (Refer to the asterisk * Marked portion of Fig. a)
- 4) Before attaching the Relay Gear ②, coat the mechanism chassis Relay Gear Axis ④ with grease SG-055G (Ref. No. J-13).

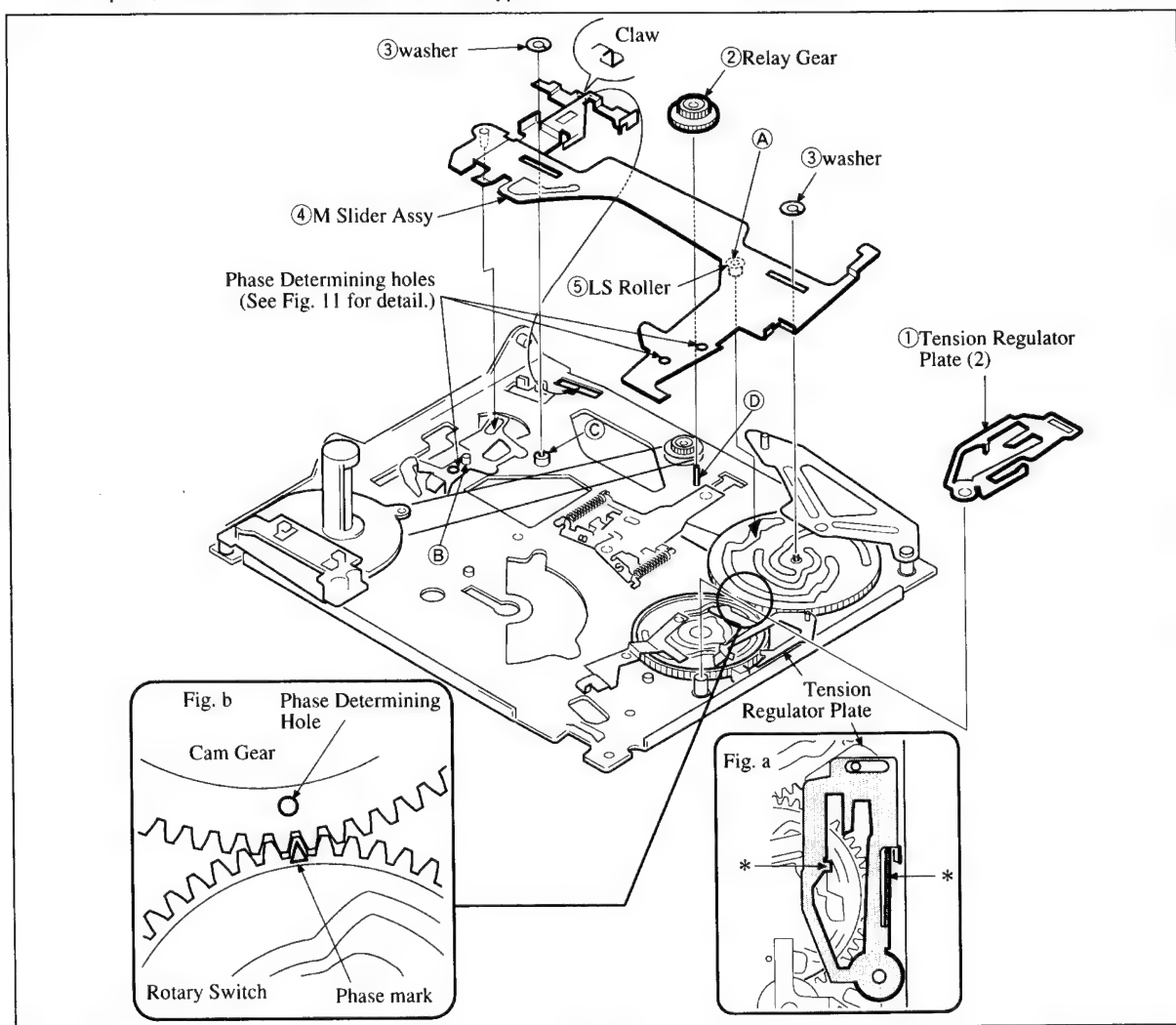


Fig. 18

3-13. LS Arm, HC Drive Arm, Pinch Press Plate, Tension Regulator Plate (Refer to Fig. 19)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove the DC Motor Assy referring to section 3-11.
- 8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
- 9) Remove the LS Arm ①. At this point, confirm that the LS Roller ② is not dropped.
- 10) Remove the HC Drive Arm ③, Pinch Press Plate ④ and Tension Regulator Plate ⑤.

2. Precautions During Re-Assembly

- 1) Before attaching the captioned parts, confirm that phases of the Cam Gear and the Rotary Switch agree. (See Fig. a.)
- 2) Insert the dowel of the Tension Regulator Plate ⑤ into the groove outside the rotary switch.
- 3) Before attaching the Pinch Press Plate ④, check for grease on the mechanism chassis Pinch Press Plate Shaft (A). If grease cannot be found, coat it with grease SG-055G (Ref. No. J-13). After attaching the Pinch Press Plate ④, align its phase hole until it agrees with the phase-determining hole on the mechanism chassis.
- 4) Insert the dowel of the HC Drive Arm ③ into the groove inside the rotary switch.
- 5) Before attaching the LS Arm ①, coat the LS roller shaft of the LS Arm ① with grease SG-055G (Ref. No. J-13).

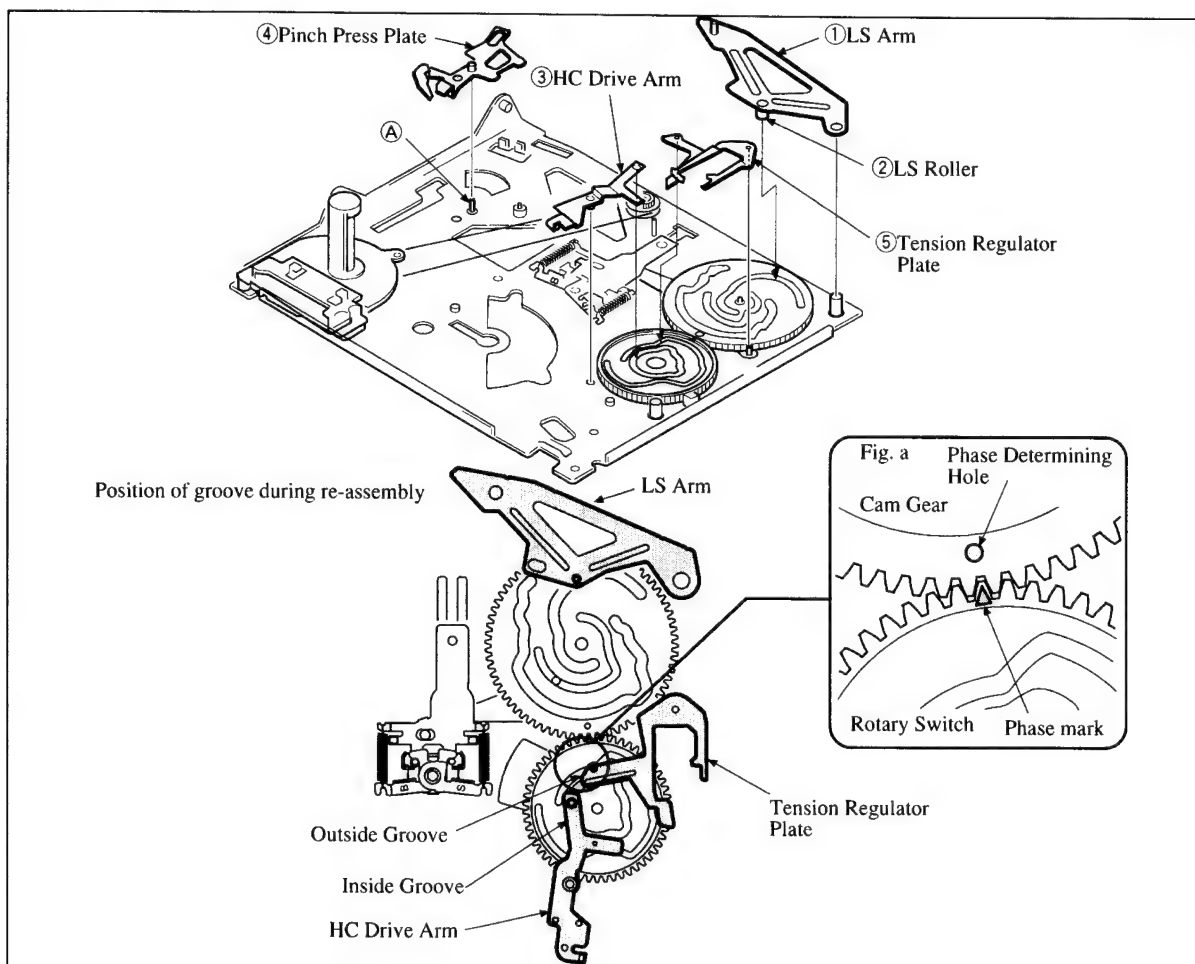


Fig. 19
— 23 —

3-14. Cam Gear (Refer to Fig. 20)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove the DC Motor Assy referring to section 3-11.
- 8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
- 9) Remove the LS Arm and Tension Regulator Plate referring to section 3-13.
- 10) Remove the Cam Gear ①.

2. Precautions During Re-Assembly

- 1) Before attaching the Cam Gear ①, align the phase mark on the rotary switch until it agrees with the phase-determining hole ① on the mechanism chassis, and align the GL Arm's phase mark ② until it agrees with the phase-determining hole ① on the mechanism chassis. Coat the mechanism's chassis Gear Axis ① with grease SG-055G (Ref. No. J-13).
- 2) Attach the Cam Gear ① so that its phase hole agrees with the phase mark on the rotary switch. (Refer to Fig. a)
- 3) After the Cam Gear ① is attached, coat the GL Arm Axis Block of the cam gear with grease SG-055G (Ref. No. J-13).

Reference : The phase marks of the Cam Gear and Rotary Switch can also be checked from the rear side of mechanism chassis. It means that the phase can be confirmed after mechanism deck is fully re-assembled.

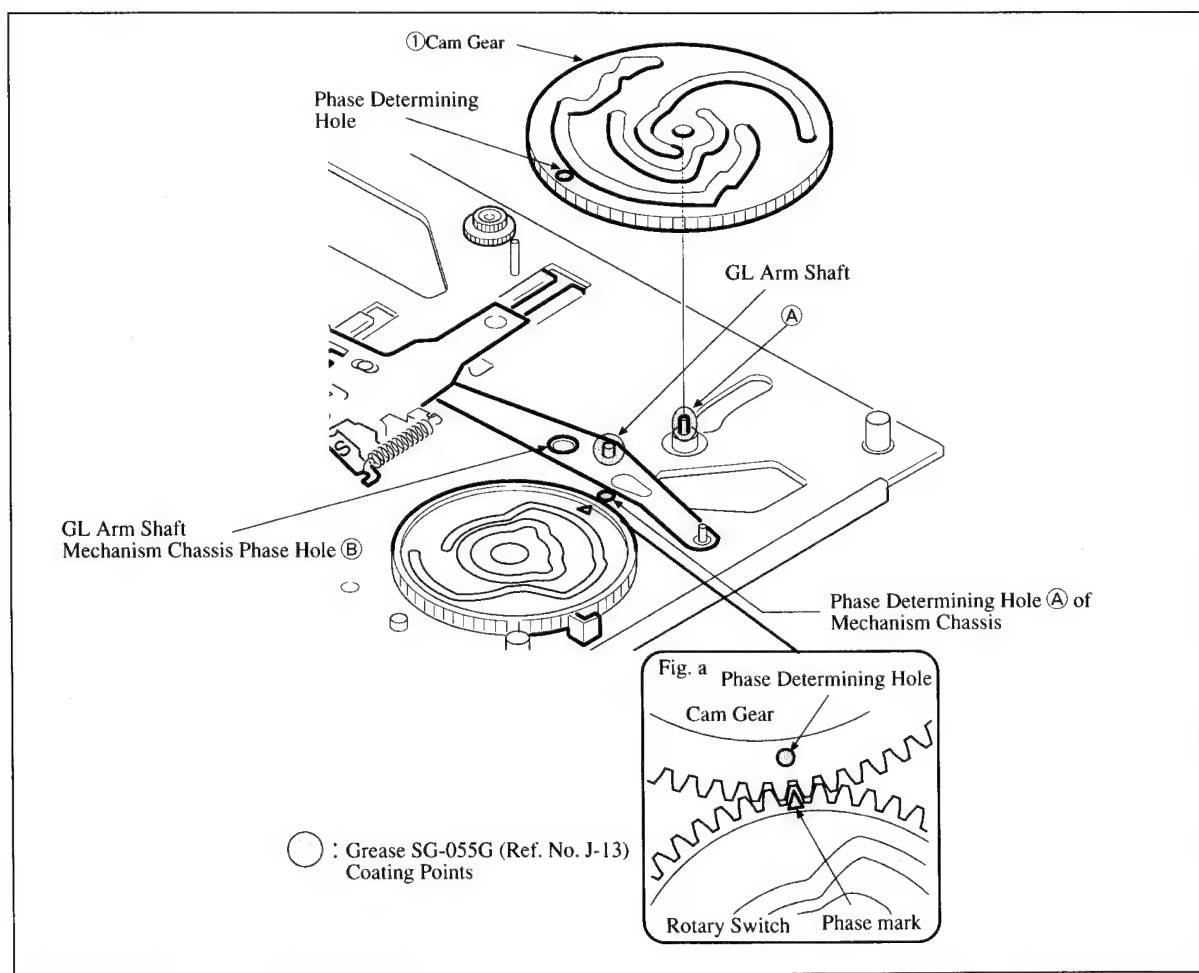


Fig. 20

3-15. GL Slider Assy, GL Arm (Refer to Fig. 21)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove the DC Motor Assy referring to section 3-11.
- 8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
- 9) Remove the LS Arm and Tension Regulator Plate referring to section 3-13.
- 10) Remove the Cam Gear referring to section 3-14.
- 11) Remove the GL Slider Assy ① by sliding it in the direction of the arrow ④.
- 12) Remove the GL Arm ②.

2. Precautions During Re-Assembly

- 1) The Tension Spring T③ is colored black and the Tension Spring S④ is colored silver.
- 2) Coat the position shown in Fig. a of the GL Slider Assy ① with grease SG-055G (Ref. No. J-13).
- 3) Coat the four points ⑤ where GL slider is attached on the mechanism chassis with grease SG-055G (Ref. No. J-13).
- 4) After attaching the GL Arm ② and the GL Slider Assy, align the GL arm phase hole until it agrees with the phase-determining hole on the mechanism chassis.

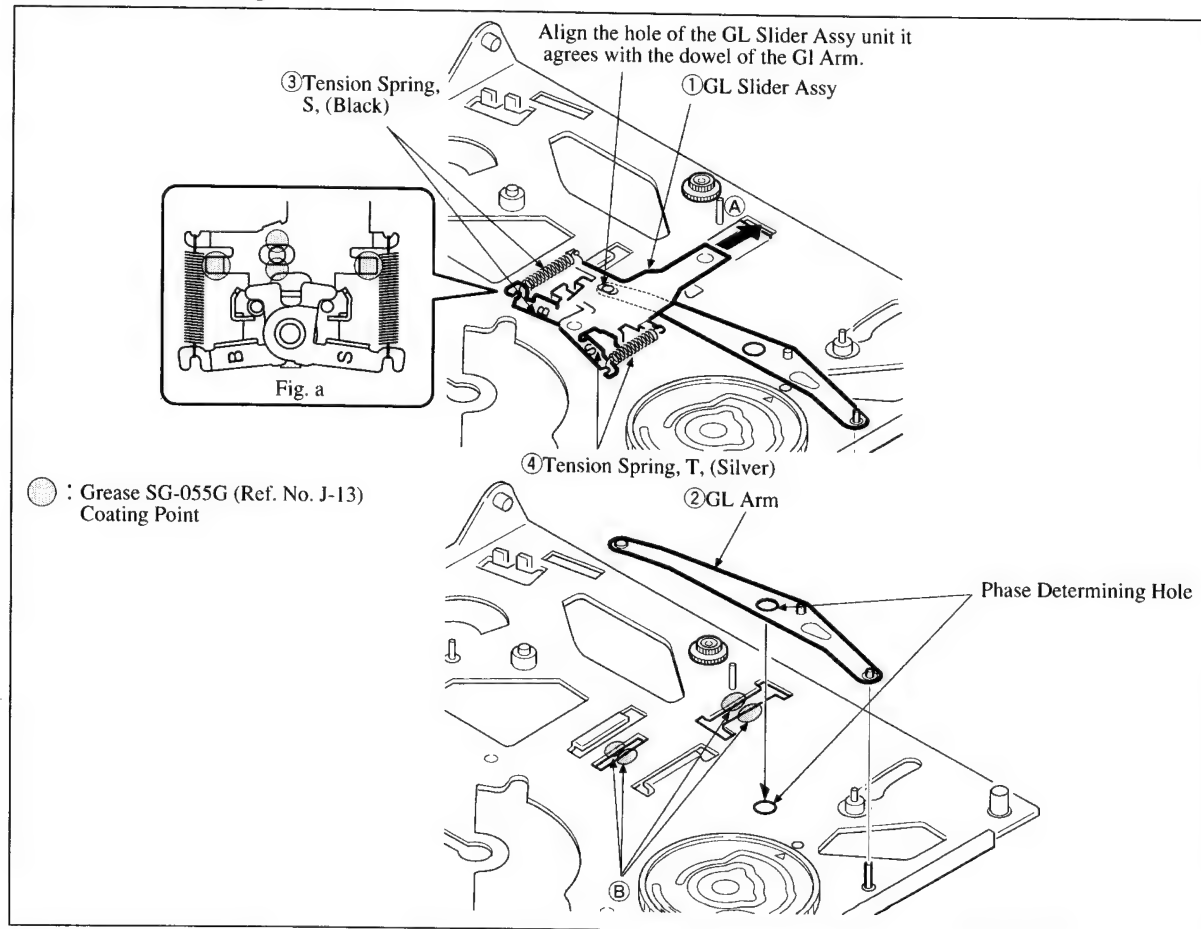


Fig. 21

3-16. Rotary Switch (Refer to Fig. 22)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove the DC Motor Assy referring to section 3-11.
- 8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
- 9) Remove the LS Arm, Tension Regulator Plate, HC Drive Arm and Pinch Press Plate referring to section 3-13.
- 10) Remove the Cam Gear referring to section 3-14.
- 11) Remove soldering the portion ① on the rear of the Rotary Switch. (Pay attention at this moment that the GL Slider and GL Arm do not drop.)
- 12) While lifting up the portion ② about 1 mm (pay attention not to break it), hold the portion ③ and turn it in the direction of the arrow ④ to remove the Rotary Switch.

2. Precautions During Re-Assembly

- 1) Before attaching the Rotary Switch by soldering on the FP-220 board, insert the portion ② dowel into the hole on the mechanism chassis. Confirm that the three claws are engaged with the mechanism chassis.

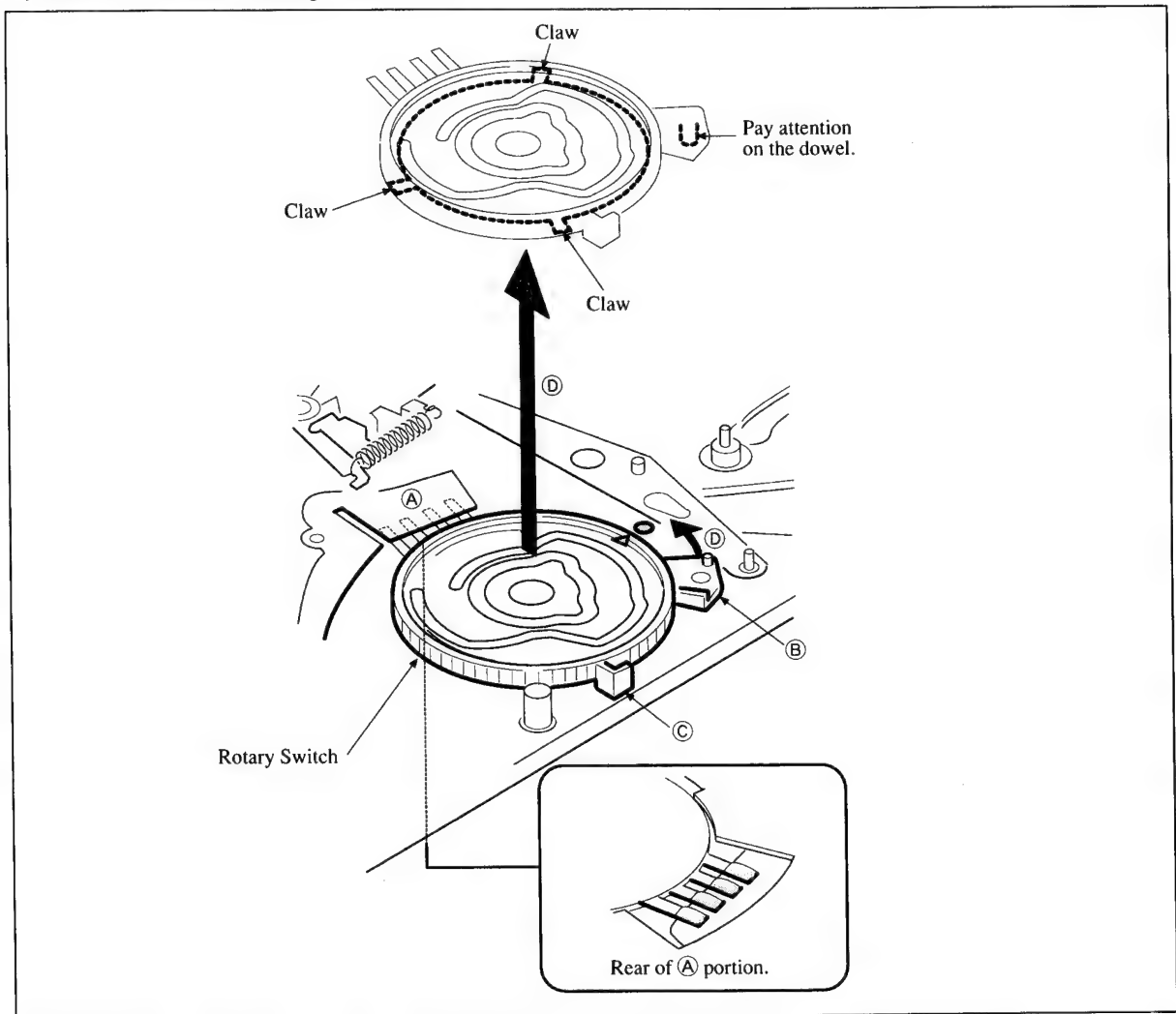


Fig. 22

3-17. Capstan Motor (Refer to Fig. 23)

1. Disassembly Procedure

- 1) Remove the Cassette Compartment Block Assy referring to section 1-1.
- 2) Remove the HC Roller Block Assy referring to section 3-1.
- 3) Remove the Drum Assy referring to section 3-2.
- 4) Remove the Drum Base Block Assy referring to section 3-3.
- 5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
- 6) Remove the LS Chassis Block Assy referring to section 3-5.
- 7) Remove the DC Motor Assy referring to section 3-11.
- 8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
- 9) Remove the Pinch Press Plate referring to section 3-13.
- 10) Remove the screw (M 1.4×6.7) ① and remove the Flexible Board Holder ②.
- 11) Remove the two screws (M 1.4×6.7) ③ and remove the Capstan Motor ④, Timing Belt ⑤ and Capstan Spacer ⑥.
- 12) Remove the washer ⑦ and remove the Changer Gear ⑧.

2. Precautions During Re-Assembly

- 1) Confirm that the timing belt is not twisted.
- 2) Do not touch the capstan with bare hand.
- 3) Lubricate the mechanism chassis's Change Gear shaft ①.
- 4) After attaching the Capstan Motor, perform the capstan azimuth adjustment.

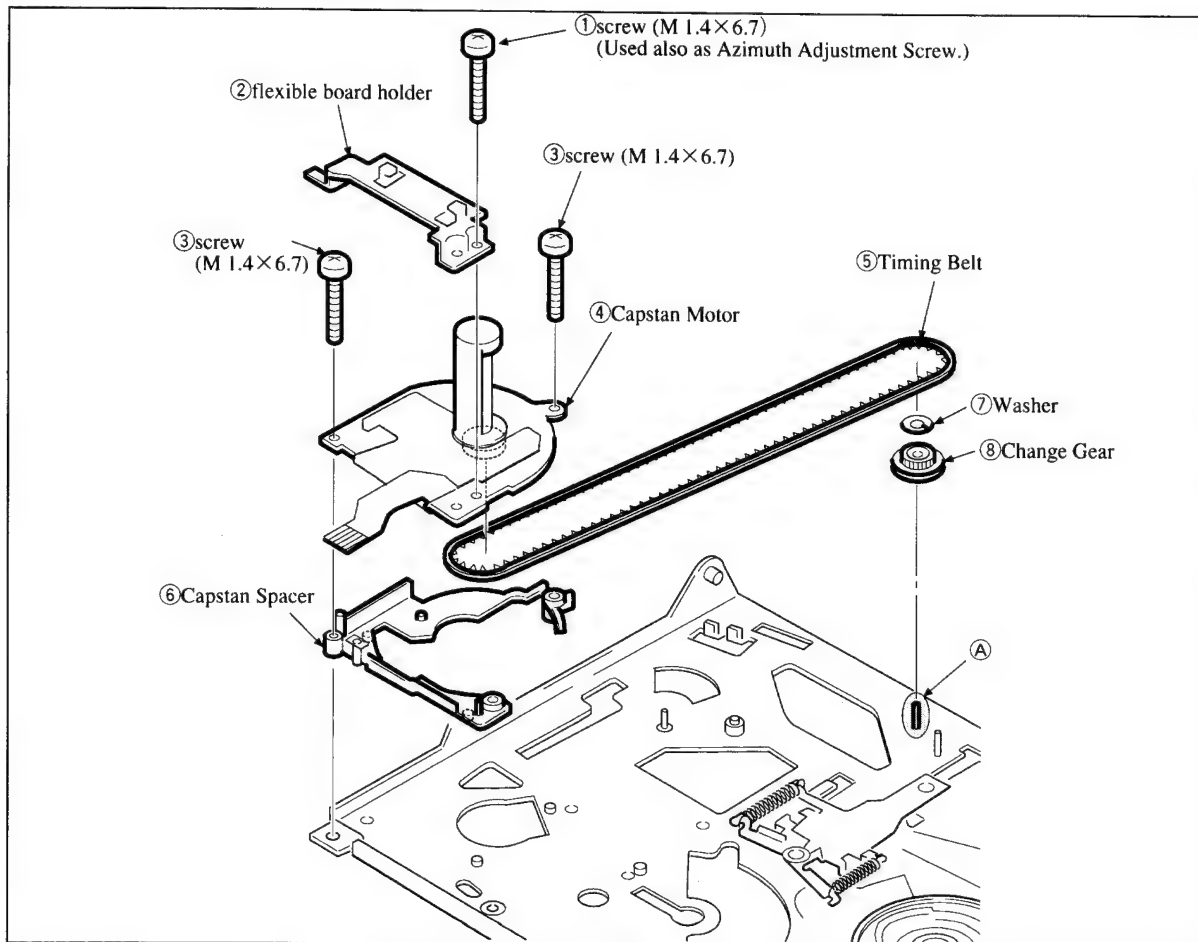
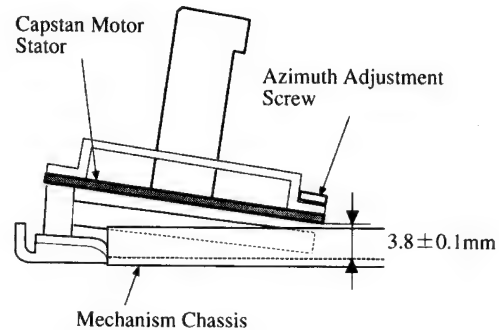


Fig. 23

3-18. Tension Regulator Position Adjustment (Refer to Fig.24)

1. Adjustment Procedure

- 1) Insert a cassette Tape and run the Tape in PB mode.
- 2) While tape is running, confirm that the distance between the LS Chassis and TG-1 Guide's top flange is 8.3mm.
- 3) If not, proceed to step 4).
- 4) Loosen the screw ① (M 1.4×3).
- 5) If the TG-1 Guide is located inside the specified position, move position of the Tension Regulator Band Assy using the FWD B.T. Adjustment tool screwdriver (Ref. No. J-9) as shown in the direction of the arrow (A). If it is located outside, move it in the direction of the arrow (B).
- 6) Tighten the screw ① (M 1.4×3).

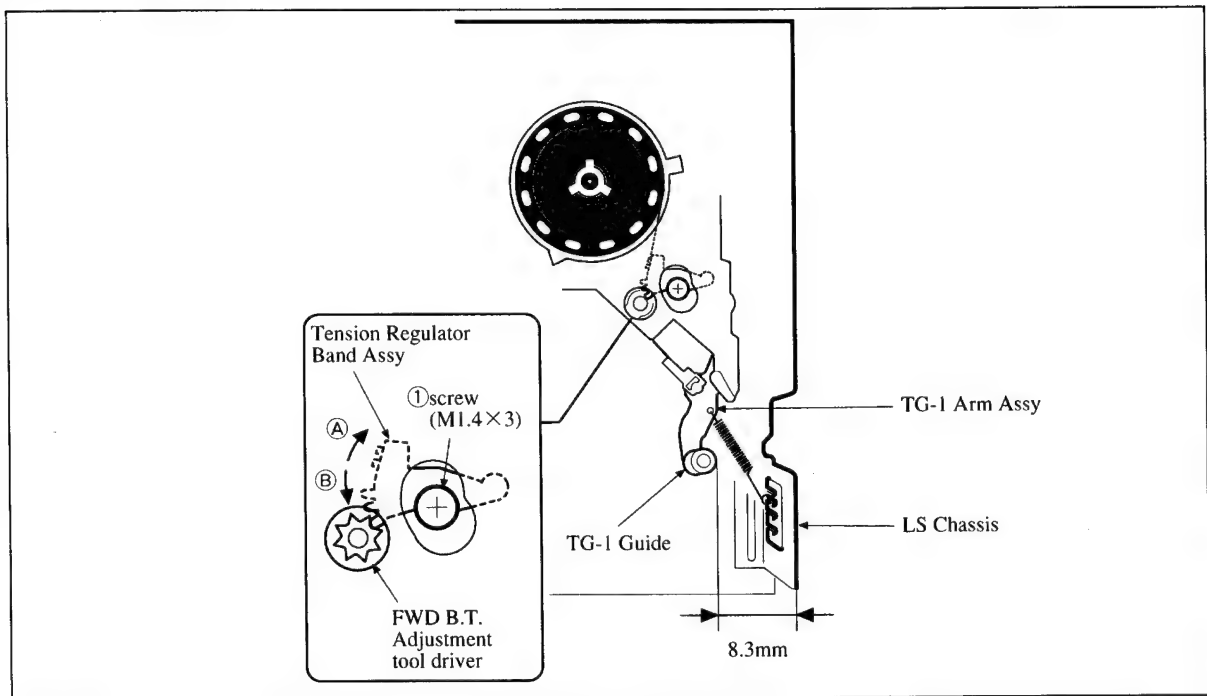


Fig.24

3-19. FWD Tape Hold-Back Tension Adjustment (Refer to Fig. 25)

1. Adjustment Procedure

- 1) Insert the torque measurement cassette to the machine.
- 2) Put the machine in the FWD mode. Confirm that the reading on the S side is in the range from 8.0 to 10.5 g•cm. If the reading is outside the specification range, make the following adjustments.
- 3) If the reading is higher than the specification, change the TG-1 Tension Spring to the side (A).
- 4) If the reading is lower than the specification, change the TG-1 Tension Spring to the side (B).

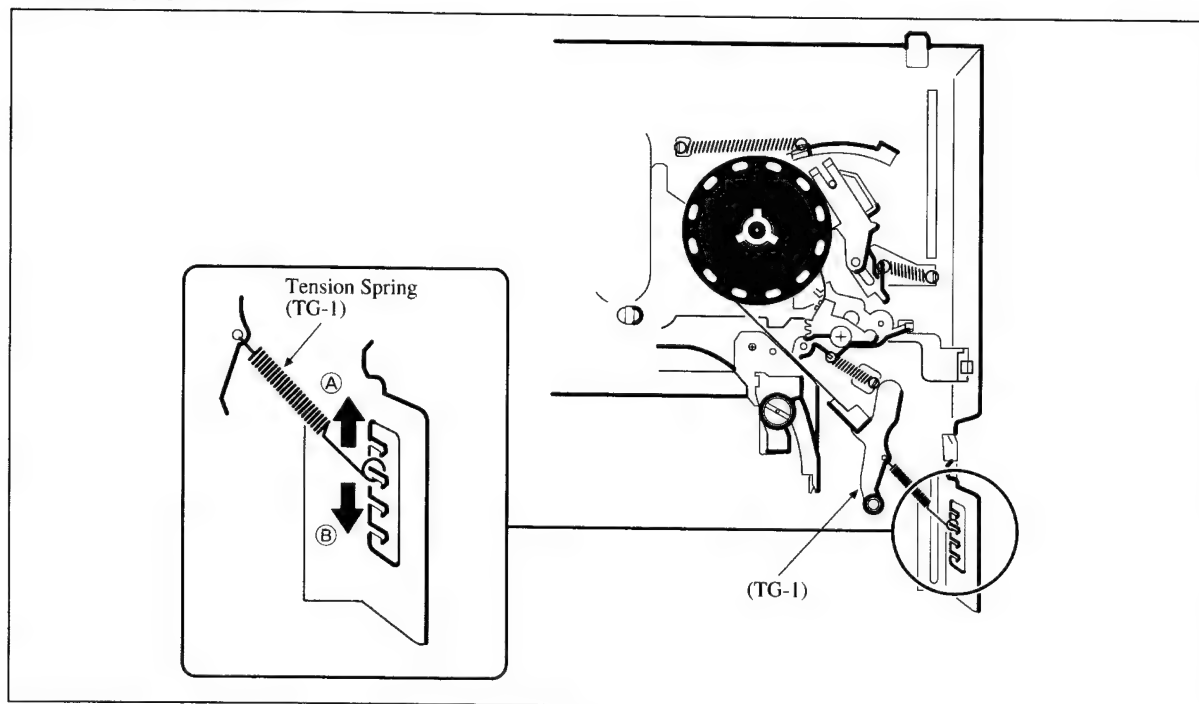


Fig. 25

4. TAPE PATH ADJUSTMENT

Purpose: Adjusts the head linearity.
Adjustment Error: Noise appears on top and bottom of display when playing back the tape recorded by other machines.

4-1. Preparations for Adjustments

- 1) Clean the tape running surface (tape guide, drum, capstan, pinch roller).
- 2) Connect the adjustment remote commander to the REMOTE terminal (JACK block).
- 3) Establish the PATH mode using the adjustment remote commander (Track Shift mode)* to cancel auto tracking.
- 4) Connect an oscilloscope.
 CH1: Test connector PB RF terminal
 External trigger: Test connector PB SWP terminal
- 5) Playback the tracking alignment tape WR5-1NP (NTSC) or WR5-1CP (PAL) (Ref. No. J-6).
- 6) Check to see that RF waveform is flat at input and exit sides on oscilloscope.
 If it not flat, perform the following section 4-2 until it is flat.
- 7) After completing the adjustment, release the PATH mode (Track Shift mode)*.

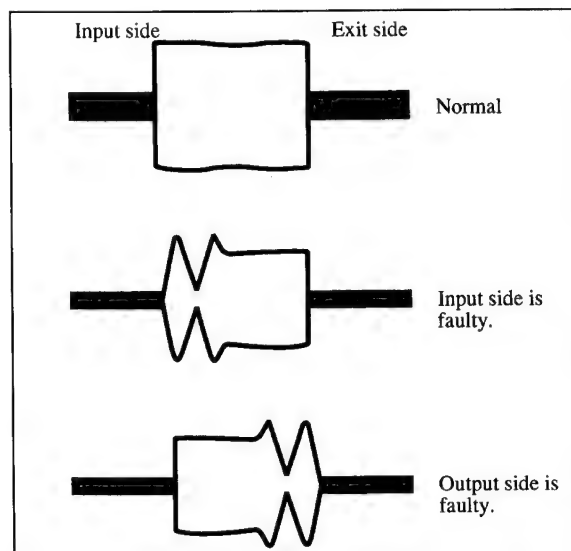


Fig. 26

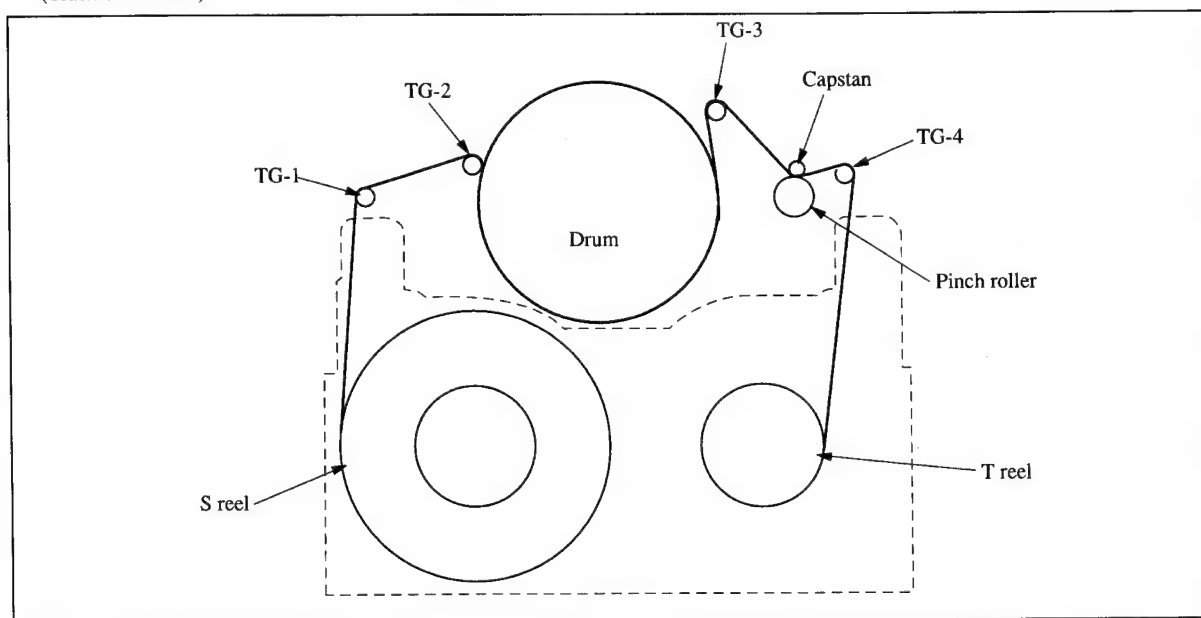


Fig. 27

* How to enter and exit the Track Shift mode. (In the case of CCD-TR420E/TR440E)

Entering the Track Shift mode

1. Select page : 6, address : 00 set data : 01 and press the PAUSE button.
2. Select page : 7, address : 01 set data : 03 and press the PAUSE button.

Exiting the Track Shift mode

1. Select page : 7, address : 01 set data : 00 and press the PAUSE button.
2. Select page : 6, address : 00 set data : 00 and press the PAUSE button.

4-2. Tracking Adjustment (Refer to Fig. 28.)

- 1) Playback the tracking alignment tape WR5-1NP (NTSC) or WR5-1CP (PAL) (Ref. No. J-6).
- 2) Adjust the tape guide No. 2 until the input side waveform becomes flat.
- 3) Adjust the tape guide No. 3 until the input side waveform becomes flat.

☆ Zenith adjustment screws for the TG-2 and TG-3 do not need to be adjusted.

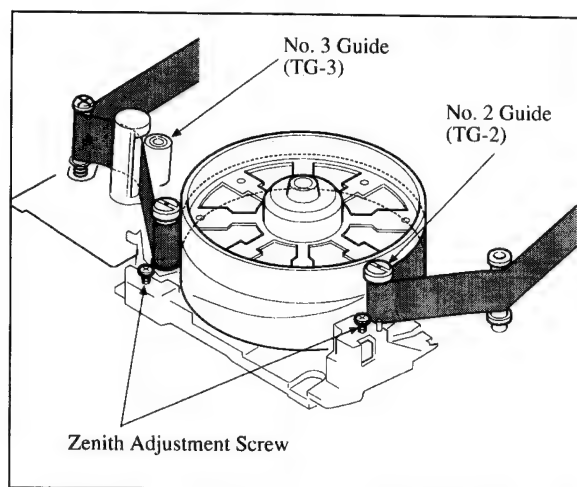


Fig. 28

4-3. No. 4 Guide (TG-4) Adjustment (Refer to Fig. 29.)

- 1) Playback a tape in REV mode.
- 2) Confirm that tape slack does not occur in between the guide No. 3 (TG-3) ① and Capstan ②. If tape slack is found, turn the height adjustment screw ④ of the Guide No. 4 (TG-4) ③ until tape slack is removed.
- 3) Playback a tape in FWD mode. Confirm that tape slack does not occur in between the guide No. 4 (TG-4) ③ and capstan ②. (Specification = 0.5 mm or less) If tape slack of more than 0.5 mm is found, turn the TG-4 nut ④ until the slack is 0.5 mm or less. Playback tape in REV mode and confirm that tape slack in between the guide No. 3 (TG-3) ① and capstan ② is 0.3 mm or less, the adjustment is complete.

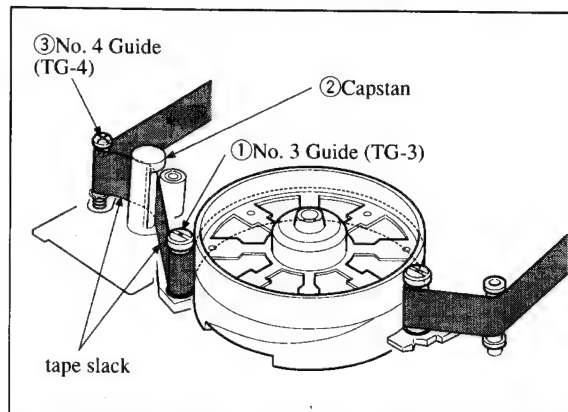


Fig. 29

4-4. CUE, REV Waveforms Check (Refer to Fig. 30.)

- 1) Playback the tracking alignment tape in REV mode.
Confirm that pitches between the peaks of the waveform are equally spaced for 5 seconds or longer.
The pitches are not equally spaced, perform sections "4-2. Tracking Adjustment" and section "4-3. No. 4 Guide Adjustment".
- 2) Playback the tracking alignment tape in CUE mode.
Confirm that pitches between the peaks of the waveform are equally spaced for 5 seconds or longer.
The pitches are not equally spaced, perform section "4-2. Tracking Adjustment".

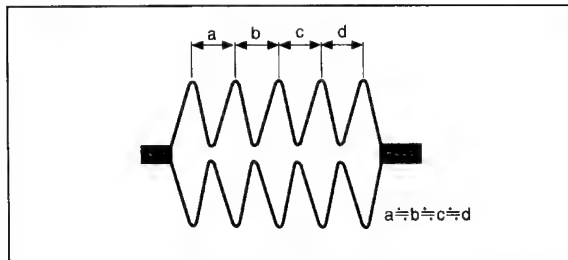


Fig. 30

4-5. Checks After Adjustments

4-5-1. Tracking Check

- 1) Confirm that amplitude of the RF waveform decreases to about 3/4 when the machine enters the PATH mode. (Refer to Fig. 31)
- 2) Confirm that the minimum amplitude (E_{MIN}) of the RF waveform is 65 % or more of the maximum amplitude (E_{MAX}). (Refer to Fig. 32)
- 3) Confirm that the RF waveform does not have too much fluctuation. (Refer to Fig. 33)

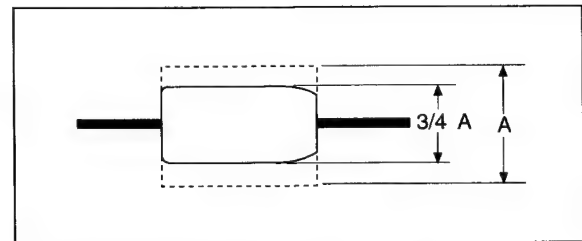


Fig. 31

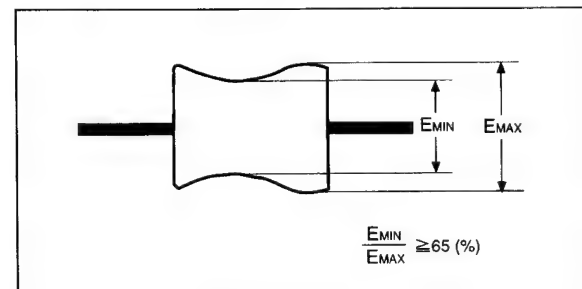


Fig. 32

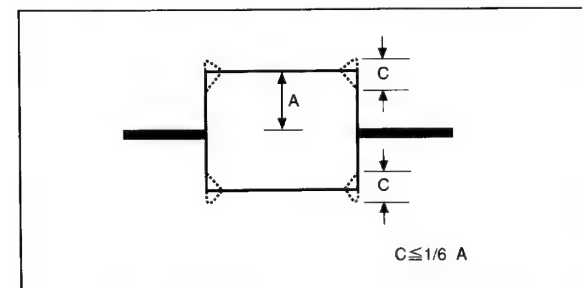


Fig. 33

4-5-2. Waveform Build-up Check (Refer to Fig. 34.)

- 1) Playback the tracking alignment tape.
- 2) Turn OFF the Track Shift mode.
- 3) Eject the tape once, insert and load the tape.
- 4) Start playing back the tape and confirm that the RF waveform builds up in three seconds with flat envelope. Confirm at this time that tape slack does not occur near pinch roller.
- 5) Playback the tape in CUE/REV and FF/REW modes respectively. Confirm that the RF waveform builds up in three seconds with flat envelope. Confirm at this time that tape slack does not occur near pinch roller.
- 6) Repeat the check items 3) to 5) again.

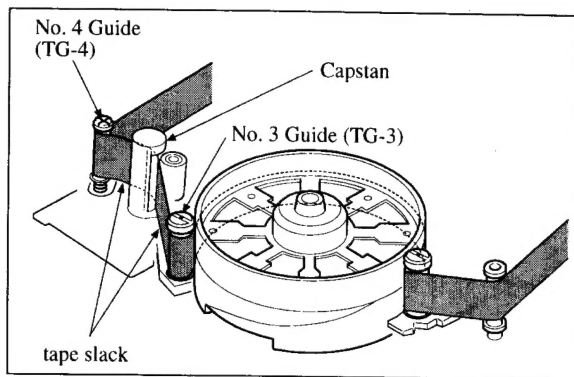


Fig. 34

4-5-3. Tape Pass Check (Refer to Fig. 35.)

- 1) Insert a thin video tape such as P6-120MP (NTSC) or P5-120MP (PAL). Playback the thin tape. Confirm that there is no clearance or curl of 0.3 mm or more at the following points: Upper flange of guide No. 2, upper flange of guide No. 3, upper and lower flanges of guide No. 4.
- 2) Confirm that there is no clearance or curl of 0.3 mm or more at each tape guide when the FF button is pressed from the playback mode to enter the CUE mode, and when the REW button is pressed from the playback mode to enter the REV mode.

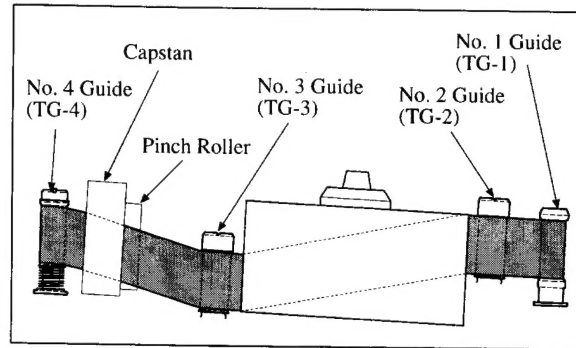
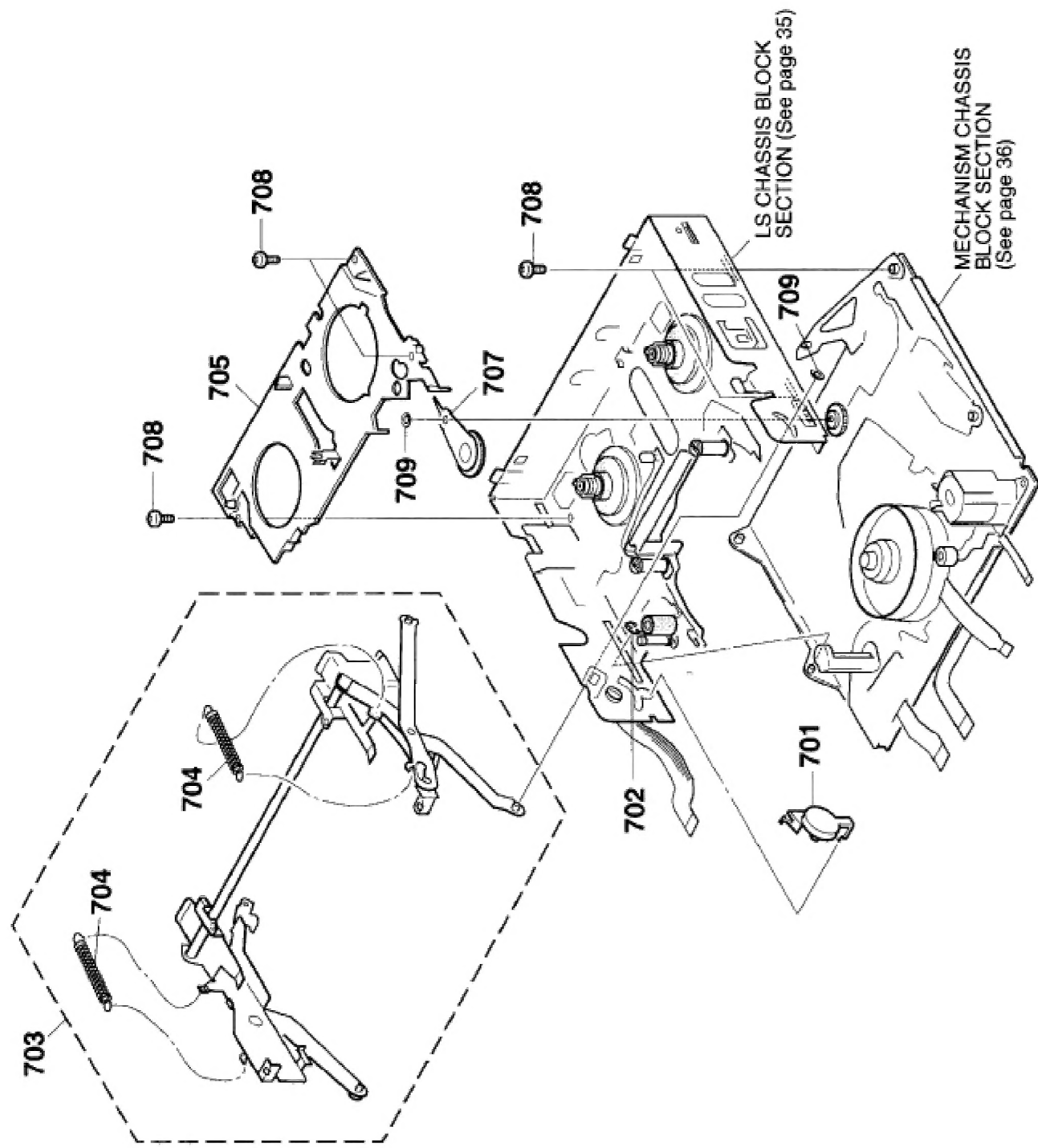
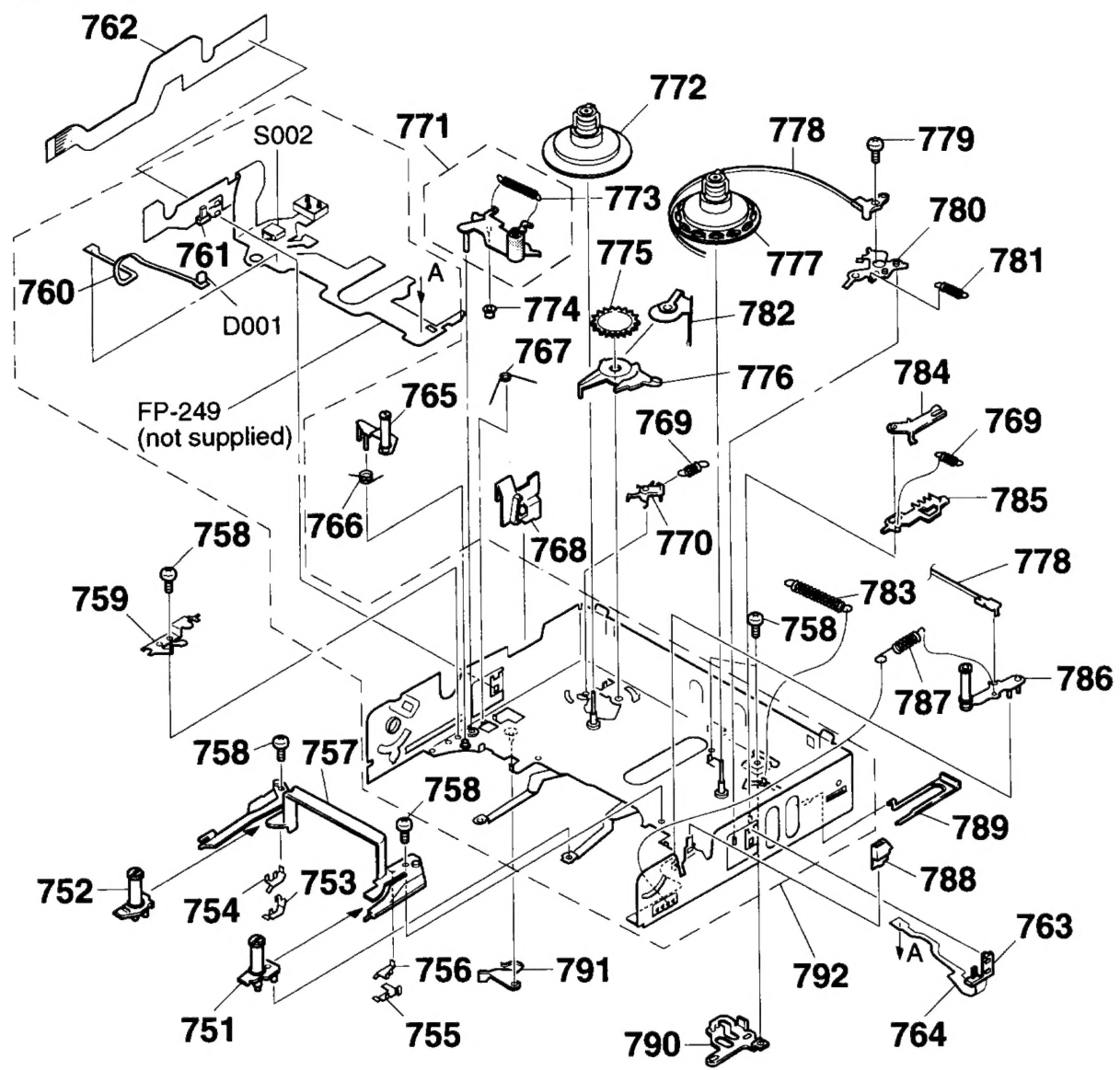


Fig. 35

5-1. Cassette Compartment Block Section



5-2. LS Chassis Block Section



5-3. Mechanism Chassis Block Section

